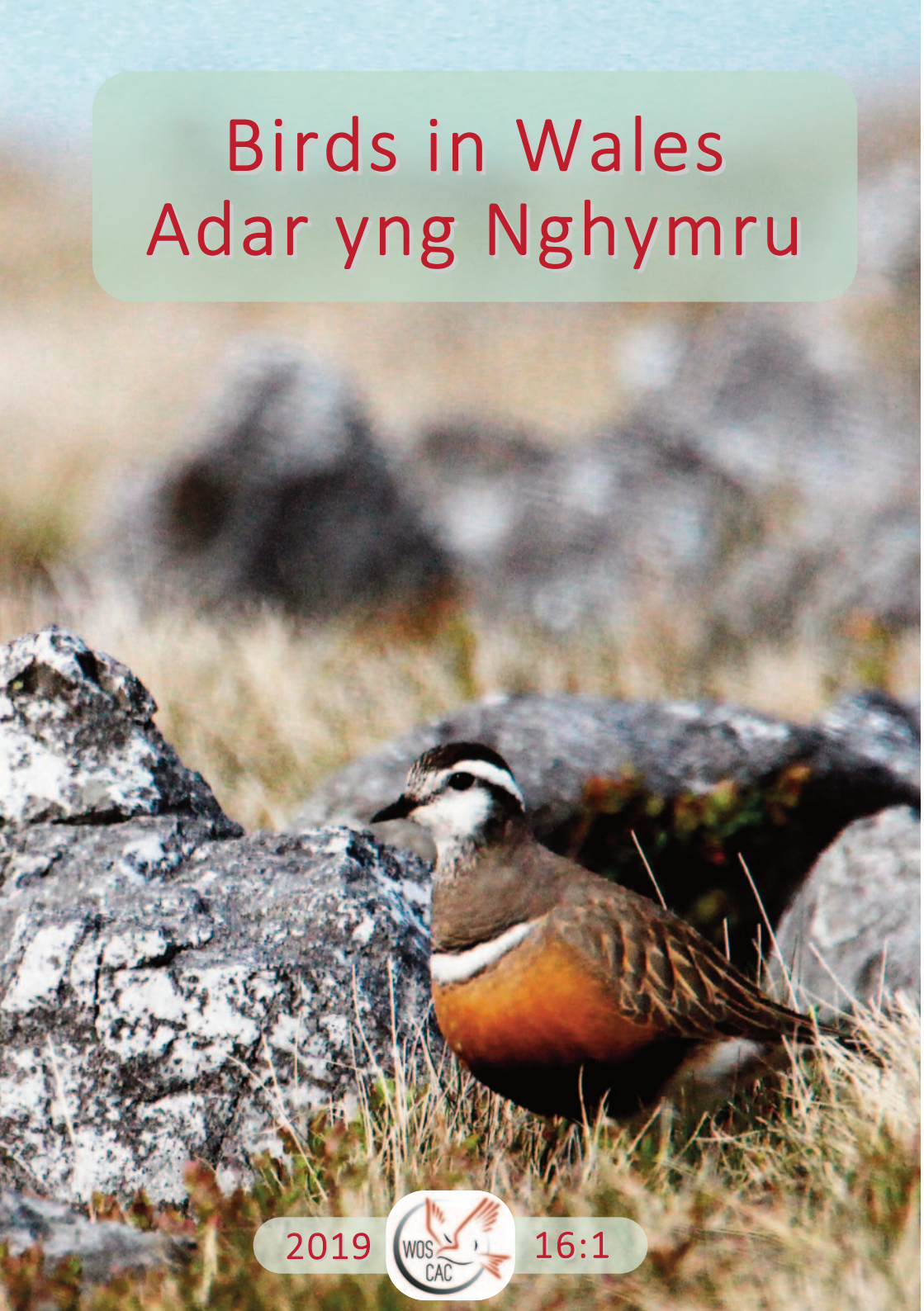
Birds in Wales
Adar yng Nghymru



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Edited by Rhion Pritchard

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Editorial

This year we have an interesting mix of papers. David Saunders discusses the fascinating history of the Orielton Duck Decoy in Pembrokeshire, first used to capture ducks for the table and then revived to capture ducks for ringing. Next we have reports on surveys of two of our most charismatic raptors. Simon Wotton presents the results of the 2016 Hen Harrier survey in Wales, and Mick Green describes a survey of Merlins in the Cambrian Mountains of Mid Wales. While a decline in the number of pairs of Hen Harrier may be largely down to weather conditions, the decline in the number of pairs of Merlin is worrying. Next there is a paper by me on the status of the Dotterel in Wales. Mark Holling and Andrew King describe the work of the Rare Breeding Birds Panel in relation to Wales, and suggest how individual birdwatchers can contribute to its work. Finally Alan Rosney gives an account of the early stages of the Glamorgan Bird Club Swift Project, set up with the aid of a grant from WOS.

Thanks to everyone who commented on the various papers, these are named in the individual papers. I thank Ian Spence for his help with the layout of this and previous issues of our journal. Thanks to Kelvin Jones for taking responsibility for the photographs, and to the photographers, credited individually for each photograph, for permission to use their work.

It is now time to consider papers for next year's Birds in Wales. If you have any ideas for papers dealing with any aspect of ornithology in Wales, please get in touch with me to discuss them. Any papers to be included in the 2020 issue will need to reach me by early April next year.

Rhion Pritchard

Figure 1. Orielton Decoy with Stanley Greenslade, Decoyman, and dog, late 1930s (H.A. Gilbert).

Orielton Duck Decoy, Pembrokeshire: a rich history

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Crynodeb

Mae gan y fagl ar Lyn Orielton ger Penfro'r hanes hwyaf o'r maglau Cymreig ar gyfer dal hwyaid i'w bwyta, ac wedi iddi gael ei hadfer yn 1934, hi oedd y cyntaf ym Mhrydain Fawr i'w defnyddio ar gyfer dal hwyaid i'w modrwyo. Daeth hyn i ben yn 1960, heblaw am atgyfodiad byr yn 1966-67, ac ers hynny mae niferoedd yr adar dŵr sy'n defnyddio'r llyn wedi gostwng yn fawr.

Summary

The decoy at Orielton Lake near Pembroke not only had the longest history of Welsh decoys for catching ducks for the table but, when restored in 1934, was the first in Great Britain used to catch ducks for ringing. This ceased in 1960, save for a brief resurrection in 1966-67, since when the numbers of waterfowl using the lake have plummeted.

Introduction

Payne-Gallwey (1886), a colourful man of many parts, writes in his classic account:

> *It may be said with confidence, that there is scarcely a park or property in Great Britain where a moderate venture in the shape of a Decoy, costing from £100 to £150, could not be constructed. Its annual expense might be £30 to £40. Any fairly intelligent keeper could work it well enough to supply its owner daily during the winter with a dainty dish for his table, besides now and again plenty of birds to spare for friendly presents as well.*

The same author reported on 215 decoys in Great Britain: 188 in England, 22 in Ireland, none was ever completed in Scotland while there were five in Wales. Recently Shrubb (2013) provided information on 237 decoys in England and Wales, an increase by 55, though still only five in Wales.

At Lymore Hall, the property of the Earl of Powys close to Montgomery, a decoy was constructed about the year 1802. It had four pipes for catching waterfowl, though few ducks were caught, the average take in the 1870s-1880s being not more than 100. Two on the Gwent levels were made worthless by the construction of the Great Western Railway, shades of twenty-first century threats there. That situated in a small area of woodland to the south-west of Bishton and known as Old Decoy Pool had five pipes, while the other at Decoy Pool Farm, 1.5 miles to the west, had three. Both are shown on Ordnance Survey maps up until the construction over this whole area of the Llanwern Steelworks which opened in 1962.

On Gower, Payne-Gallwey reported that Sir Henry Hussey Vivian (there is a thumping great statue of Sir Henry in St. David's Square, Swansea):

Figure 2. A map of the Orielton Decoy, Pembrokeshire (Brian Southern).

Figure 3. Orielton No 4 Pipe, repairs nearing completion in summer 1948 (Probably by C.T. Dalgety).

formed a small decoy, Parc Wern Decoy in Llanridian Marsh, east of the village of that name, at Killibion, near the estuary of the Burry river, on its south shore to the east of the village with three pipes just to supply his wants, taking about 114 head per year.

This description is misleading as Parc Wern is an area of Swansea; the decoy was actually on the Parc-le-Breos Estate just south of Cillibion. Examination of historic Ordnance Survey maps reveals that the Decoy, grid reference SS515910, actually had five pipes and a boathouse while the current Explorer Map, No 164 covering Gower marks Decoy Wood, though there is no longer any open water. The fifth decoy is that at Orielton, Pembrokeshire, the subject of this paper. By the early years of the twentieth century this was the only working decoy in Wales (Whitaker 1918).

Ducks for the table

Orielton Lake, of some 14 acres (5.6ha), at SR950994 located some two and a half miles south-west of Pembroke, dates from about 1820. The estate had long been in the possession of the Owen family, though the profligacy of John Owen resulted in its sale in 1857. The new owner Mark Antony Saurin and his son Morgan James Saurin began construction of the decoy in 1868. Payne-Gallwey (1886) pages 147-149 provides a very full account reproduced below:

This Decoy (a very good one) is the property of Lieutenant-Colonel Saurin of Orielton, in the county of Pembroke, South Wales, who kindly supplies the following most interesting details:- It is situated on a lake of 15 acres, within the park, the carriage drive running within 200 yards of two of the tunnel nets. The lake lies east and west is over a quarter of a mile long, and of an average breadth of 150 yards, a stream running through it. The pipes are four in number. No. 1 is situated on the north side of the lake, No. 2 at the north-east corner, No. 3 at the east-south-east corner, and No. 4 at the south side of the lake. No pipes could be placed at the west end, as the lake terminates there in a high embankment. This is a disadvantage, as the prevailing wind during the season is westerly. The pipes average 12 feet in height, the smallest hoop being, as usual, 2 feet. The average width at the mouth is 18 feet, Nos. 2 and 3 are 70 yards long; No. 1 about 60 yards; and No. 4 40 yards. The last might advantageously be lengthened, but the nature of the ground is an obstacle.

The lake is artificial, and was made in the year 1820, but though great numbers of wildfowl frequented it, no attempt was made to form a Decoy till the year 1868, when a pipe was constructed on the northern shore of the lake; but owing to its faulty position, and its being overshadowed by trees, was shortly afterwards dismantled, and the pipe called No. 2 was made in 1871; it having been found to answer, No. 3 was added in 1873. Next year the pipe No. 1 was opened, and this was followed in 1876 by the pipe called No. 4. These four pipes have been in constant working order ever since.

No authentic record is extant of the number and description of fowl taken before the year 1877, but since that date a careful account has been kept, from which the enclosed is an extract: The largest number taken at one time was 130 Teal, on January 1, 1879. The greatest number taken in one day was 202, of which the 130 above mentioned formed part; the remainder being made up by 14 Duck, 18 Wigeon and 40 Teal. The birds on this occasion all fed in.

As will be seen from the accompanying extract, the majority of fowl taken are Wigeon, which on this coast are excellent for table. Duck and Teal come next in order, the preponderance varying in different seasons according to wind and weather. In addition to the Pintail and Shoveler Ducks

1877 to 1887							
Season	**Mallard**	**Wigeon**	**Teal**	**Pintail**	**Shoveler**	**Others**	**Total**
1877-78	5	504	341	0	0	3	853
1878-79	183	452	871	6	4	15	1,531
1879-80	244	604	485	6	6	23	1,368
1880-81	100	275	317	2	1	16	711
1881-82	70	535	190	1	1	5	802
1882-83	85	643	264	1	1	3	997
1883-84	150	562	363	3	1	1	1,080
1884-85	360	575	144	9	2	1	1,091
1885-86	129	287	133	4	0	9	562
1886-87	151	190	102	1	1	1	446
Totals	**1,477**	**4,627**	**3,210**	**33**	**17**	**77**	**9,441**
			1887 to 1897				
Season	**Mallard**	**Wigeon**	**Teal**	**Pintail**	**Shoveler**	**Others**	**Total**
1887-88	208	602	486	0	6	6	1,308
1888-89	71	597	256	0	0	7	931
1889-90	148	1,061	757	4	1	3	1,974
1890-91	405	1,395	682	31	7	1	2,521
1891-92	180	708	190	0	0	0	1,078
1892-93	179	442	147	14	4	3	789
1893-94	98	1,439	245	2	4	0	1,788
1894-95	71	402	453	1	1	0	928
1895-96	168	759	316	0	0	1	1,244
1896-97	188	679	232	1	0	0	1,100
Totals	**1,716**	**8,084**	**3,764**	**53**	**23**	**21**	**13,661**
			1897 to 1907				
Season	**Mallard**	**Wigeon**	**Teal**	**Pintail**	**Shoveler**	**Others**	**Total**
1897-98	55	748	157	0	1	1	962
1898-99	93	323	151	0	0	3	570
1899-00	309	303	776	0	3	3	1,394
1900-01	102	478	464	4	1	0	1,049
1901-02	228	254	1,099	7	4	5	1,597
1902-03	446	246	899	4	2	2	1,599
1903-04	88	230	477	0	1	0	796
1904-05	98	213	476	1	18	6	812
1905-06	73	742	411	5	9	1	1,241
1906-07	34	553	542	12	11	0	1,152
Totals	**1,526**	**4,090**	**5,452**	**33**	**50**	**21**	**11,172**
			1907 to 1918				
Season	**Mallard**	**Wigeon**	**Teal**	**Pintail**	**Shoveler**	**Others**	**Total**
1907-08	48	263	572	12	15	0	910
1908-09	60	467	384	7	0	18	936
1909-10	67	243	296	0	0	17	623
1910-11	25	211	54	0	7	4	301
1911-12	13	83	171	0	0	1	268
1912-13	5	463	93	0	0	34	595
1913-14	46	341	164	0	9	44	604
1914-15	25	318	369	5	10	144	871
1915-16	7	238	163	10	4	84	506
1916-17	54	256	140	7	4	85	546
1917-18	11	290	385	5	1	95	787
Totals	**361**	**3,173**	**2,791**	**46**	**50**	**526**	**6,947**
Note: This is an eleven year run compared to the ten year runs in previous decades							

Orielton Decoy Ducks Taken for Eating						
Mallard	Wigeon	Teal	Pintail	Shoveler	Others	Total
5,080	20,174	15,217	165	140	645	41,421

Table 1b (above). The totals of ducks caught for eating at Orielton Duck Decoy, 1877 - 1918.

Table 1a (p6, opposite). Orielton Decoy, seasonal totals of ducks taken for eating.

mentioned in the list, 1 Sheldrake, 1 Barnacle Goose, 1 Pochard, and 2 Gadwall have been taken. The term "various" includes Swans, Pheasants, Snipe, Waterhens, Baldcoots and 2 Divers.

A curious incident occurred on December 6, 1884. As the Decoyman was entering No. 1 pipe to feed the tame Ducks, a Heron pursued by a Peregrine dashed into the pipe. The man at once showed on them, ran them into the tunnel net, and took them both.

The means employed for catching are the dog and feeding, a number of tame ducks being kept on the lake. The dog is of most use at the beginning of the season. As the Decoy was worked by the proprietor principally for his own amusement, the number of birds taken varied with the amount of time he was able to devote to Decoying.

The first pipe at this Decoy was constructed by a gamekeeper named Sharpe, from Norfolk. Two others were made by George and T Gilbert Skelton, and one of the Williamses from Suffolk made the last. The Decoy is situated within a short distance of the south shore of Milford Haven, a large extent of water and ooze much frequented by wildfowl.

Whitaker (1918), another rich source, brings the story up to date with information provided by Colonel Saurin, including reference to the cage traps placed half on shore, half in the water by Andrew McTaggart, the gamekeeper at Orielton. Wigeon (*Mareca penelope*) and Teal (*Anas crecca*) were used as decoys, with the traps being cleared at night by lamplight after the wildfowl had left. The best catch in one day was 47. Saurin further describes how iron sheets, which were considerably cheaper, replaced the reed screens, though not surprisingly the slightest touch on these alerted the ducks. Saurin concludes his letter by saying that McTaggart hopes, with 'the addition of two or three more traps and an automatic seed distributor, which is now being completed, to greatly increase the number of wildfowl taken on this decoy pond.'

Payne-Gallwey (1886) provided details of the wildfowl taken at Orielton in the eight seasons 1877-78 to 1884-85, a total of 8,443. The earliest start to the season was 25th August 1883, the latest being 28th November 1877, while the last birds taken in each year were in February, the latest date the 26th in 1881. Stott and Mitchell (1991), drawing on an Orielton Decoy Book held in the Pembrokeshire Archives, supplemented Payne-Gallwey's information by adding some of the subsequent years until 1912. Whitaker (1918) provides details of wildfowl taken for the years 1905-1918 which enabled Saunders (2008) to construct a table showing the wildfowl taken from 1877-78 until 1917-18 with only the years 1891-92 until 1904-05 missing. Having more recently discovered that the Decoy Books for the whole of the period 1877 to 1919 are held in the Alexander Library, Oxford, having been presented by Major W M Saurin and H A Gilbert, date not recorded, revised totals are now available (Table 1).

In summary Mallard (*Anas platyrhynchos*), Teal and Wigeon were the main species taken, some 40,461 in total. The others, most notably Pintail (*Anas acuta*) and Shoveler (*Spatula clypeata*) were taken in comparatively minute numbers, only 950 in total.

A further source of information concerning the Orielton Decoy a century or more ago is a book held in the Pembrokeshire Archives covering the seasons 1908 until 22nd January 1912, fifty-four pages in all, the left-hand pages having the date and the number of each species caught. The right-hand page provides details of how the catch was distributed, sometimes to the 'House' (presumably Orielton House itself) sometimes to others e.g. a single entry '11 Teal Lord Kensington' on 24th December 1908 or a listing like that of 28th December 1909 when fourteen recipients were each given two Wigeon, while one paid 2/6d.

Regularly ducks were sent to local farmers in exchange for seed, presumably to be used at the Decoy, sometimes each farm listed as in November 1908 '2 Wig Goldboro seed, 2 Marston seed, 2 East Popton seed.' sometimes a single entry as on 18th November 1908 '22 Wigeon sent out to farmers'. Some duck were sold to Smith & Son of Tenby, for example on 9th November 1908 '15 Wig, 27 Teal' and on 13th November '6 Duck (these were Mallard), 22 Wig, 27 Teal'. On 21st January 1909 an entry reads 'Smith & Son Account settled to this date' though alas without any amount being recorded. On 3rd November 1910 Smith & Son paid 11/3d for '12 Teal, 8 Wigeon' of which '4 Teal unusable.' Occasionally other ducks were sold, on 21st December 1908 a Wigeon to Tracy Watchmaker for 1/6d and on (date unclear) 3 Wigeon and 3 Teal to a Mrs Lewis for 5/3d. There are several references like that of 5th November 1908 to "Spoonbills" (I am sure this refers to Shoveler) being kept alive, on this occasion five, though no indication as to why.

Ducks for ringing: the pioneering years

The first ducks to be caught at a decoy, ringed and released were Teal purchased by the pioneer Danish ornithologist Hans Christian Cornelius Mortensen in 1907 at a decoy used for commercial purposes on the island of Fano, western Denmark. Subsequently about a hundred were ringed together with 320 Pintails. This initiative was followed in 1911 by the Dutch, a Teal being caught the following year at Abbotsbury, Dorset (Kear 1993).

Like nearly all decoys, the cessation of catching ducks for the table might have meant the end for Orielton as the pipes were allowed to fall into ruin, but now entered upon the scene two remarkable players. Cyril Mackworth Praed (1891-1974), whose family for a short while had resided at Orielton, best known as joint author of the African Handbook of Birds and renowned for his skill with rifle and shotgun, and Captain H. A. Gilbert (1886-1960) of Herefordshire, sometimes referred to as 'Balmy' or 'Barmy' Gilbert, a man having an exuberant approach to outdoor pursuits with many achievements, as an ornithologist, as a cricketer (he played in first class matches for some twenty-five years) and as an angler. Together they opened an extraordinary new chapter at Orielton in 1934 by re-establishing the decoy, this time for ringing the ducks caught, the first time in Great Britain a decoy was used for the study of bird movements and migration.

Gilbert (1937) wrote:

> *An abandoned decoy, derelict and forlorn is a most distressing sight. The pipes are silted up, alders have grown and wrecked the hoops, tattered rotten netting waves among the branches, there is a general air of decay. Years of careful work – men's whole lives in fact – have been keeping the old decoy clean, tidy and workable.*
>
> *When we first saw Orielton on a February day, the old decoy presented a dismal sight. Could it ever be restored from chaos to tidiness? … Yet there was one slight gleam of hope. Overhead round and above us flew a nice bunch of teal, a few wigeon, a dozen shoveler and a flock of tufted duck. The ducks never came within shot, but refused to leave …. Even after twenty years of*

shooting they were obviously attached to the place.

On that slight encouragement, and against the advice of all the wise, we decided to rebuild the old decoy again from the beginning. There was a chance we might learn something about the migrations of duck. So we began to work, not for sport, but for science – that sternest of taskmasters.

A priceless record of their endeavour is provided by a series of duplicated Orielton Duck Decoy Reports, thirteen in all published between 1936 (No.1) and February 1939 (No. 13). I have been unable to trace any subsequent editions; the next would have been due in the autumn of 1939 by which time the Second World War was under way. The story of the Orielton Decoy during those first four years (1936-1939), together with the papers by Gilbert and Mackworth Praed, is thus available in detail.

The day to day running was undertaken by Stanley Greenslade, the decoy books still smell of his pipe smoke, who had worked at Orielton all his life and ensured that no one visited the decoy without written permission from Gilbert or Mackworth Praed. Greenslade's day was described in the Orielton Decoy Report November 1936:

He has to be at the decoy when it "assembles" half-an-hour before dawn. Between that time and 10.30 a.m. the ducks are swimming etc and lively. Hence it is the best time to make a catch. In the middle of the day the duck rest up and sleep. Greenslade has to watch because a number may pile up around the entrance to a pipe and give another chance. When startled by the dog it may be a good one. About 3.30 p.m. the ducks wake up again, and Greenslade watches until the "break" of the decoy at dusk in order to prevent trespass by man or dogs. He has to ring all ducks caught, and enter numbers and species in the register and to record all recaptures in the "recapture" book.

The log book [Alas this has not been traced] *which records incidents, weather, height of water, and members present etc has also to be written up. Further he records all ducks ringed on Messrs Witherby's forms for British Birds and the day's catch in the Decoy book which has been kept since 1877. After tea he returns to the decoy, empties and rebaits the Teal traps, frees the pipes of floating weed, and does all necessary repairs. His day ends about 9 p.m. and he "calls it a day" – rain or shine.*

Greenslade's own contributions bring the story to life even further, of when the Decoy Lake was frozen over, and on another occasion how:

Going round the traps I got blown off my feet and worst luck I fell on my landing net and of course smashed it up and I am now fairly in the cart.

In 1937 he travelled to Birmingham with Gilbert, the first time he had journeyed more than fifteen miles by train. This was to broadcast about the Decoy, though without revealing its location. The same year there was a description of the decoy and details of the ringing recoveries at a hunting exhibition in Berlin, Greenslade writing 'I wonder what Herr Hitler thinks of Pembroke?' Indeed one ringing recovery letter from Germany was marked 'Herr Hitler'.

The majority of ducks were lured into the pipes by 'showing the dog'. In 1934 there were four dogs, one described as 'useful and disciplined', the second as 'not brisk enough', the third and fourth as being 'the most serviceable in appearance but mutinous in behaviour' - one can only speculate at

Season	Mallard	Wigeon	Teal	Pintail	Shoveler	Tufted	Total
1934-35	205	4	104	0	0	13	326
1935-36	590	65	552	0	36	16	1,259
1936-37	168	77	871	47	9	4	1,176
1937-38	210	30	1,086	21	30	55	1,432
1938-39	126	216	1,217	53	129	70	1,811
1939-40	307	73	736	71	18	37	1,242
1945-46	54	20	1,096	6	5	1	1,182
1946-47	14	73	915	1	9	12	1,024
1947-48	78	0	445	3	2	1	529
1948-49	8	23	32	2	0	1	66
1949-50	7	70	176	2	7	1	263
1950-51	39	2	316	0	0	4	361
1951-52	25	18	229	0	2	6	280
1952-53	12	0	208	0	0	1	221
1953-54	7	2	81	7	4	3	104
1954-55	17	3	34	0	0	2	56
1955-56	26	22	427	1	0	11	487
1956-57	12	0	186	0	5	11	214
1957-58	11	4	93	0	20	4	132
1958-59	5	0	152	1	1	1	160
1959-60	17	0	74	0	0	3	94
1960-61	4	0	26	0	0	0	30
TOTALS	**1,942**	**702**	**9,056**	**215**	**277**	**257**	**12,449**

Table 2. Wildfowl caught and ringed at Orielton Decoy, 1934-40 and 1945-60.
Note: A male Gadwall (*Mareca strepera*) was caught and ringed on 25 November 1938 and a female was caught and ringed on 29 August 1950. A male Common Scoter (*Melanitta nigra*) caught and ringed on 28 January 1950 was followed by a female the following day.

	Teal	Wigeon	Pintail	Shoveler	Tufted Duck
Great Britain & Ireland	835	58	15	21	9
Belgium	4				
Denmark	18			2	
Finland	15		1		1
France	14				
Germany	19	1	1	1	
Iceland			1		
Italy	3				
Latvia	3	1	1*		1
Netherlands	42	3	1	5	2
Norway	5				
Poland	1				
Portugal		1			
Romania	1				
Russia	12	8	1	4	1
Sweden	27	1			
Totals	**999**	**73**	**22**	**33**	**13**

Table 3. Recoveries to 1945 of ducks ringed at Orielton, compiled from Mackworth Praed 1946.
* A recovery unknown to Mackworth Praed was a female Pintail ringed on 15 February 1939 and recovered, presumably shot, at Salyni, Saldus, Latvia on 2 June 1941 though not reported at this time (Spencer, 1957).

	Mallard	Teal	Wigeon	Pintail	Shoveler	Tufted Duck
Great Britain & Ireland	10	187	4	1	3	
Belgium		4				
Denmark	1	32	1		1	
Finland		20	1			
France	1	18	1	1		1
Germany		12				
Iceland		0				
Italy		0	1			
Latvia		0				1
Lithuania		2	1			
Netherlands	2	26	2		1	1
Norway		3				
Poland		3				
Portugal		0				
Romania		0				
Russia	1	28	10	1		3
Spain		1				
Sweden	1	14	2			
Totals	**16**	**350**	**23**	**3**	**5**	**6**

Table 4. Recoveries of ducks ringed at Orielton, 1946 to 1960. Compiled from the Decoy Books and Bird Ringing reports published in *British Birds.*

this. Later a small mongrel 'of very indefinite parentage looking like a red guinea-pig but has a great attraction to ducks' was used. A stuffed Fox given the name 'Charles James', though for what reason is unknown, proved most successful as did whisking a Fox brush from behind a screen. Cage traps were also used, being visited after dark, and most of the diving ducks were caught in these.

Coots (*Fulica atra*) and Moorhens (*Gallinula chloropus*) were an 'unmitigated nuisance' as if they were in the decoy pipe at the time of the catch they would fly back past the decoyman, leading the duck out. Some were ringed and taken away, Moorhens returning freely from 12 to 15 miles while some Coots returned from over 50 miles. Coot recoveries overseas were reported from Jutland, Latvia and Russia (Donovan and Rees 1994). Other species caught included Cormorant (*Phalacrocorax carbo*), Grey Heron (*Ardea cinerea*), Little Grebe (*Tachybaptus ruficollis*), Water Rail (*Rallus aquaticus*), Redshank (*Tringa totanus*), Woodcock (*Scolopax rusticola*), Snipe (*Gallinago gallinago*) and Kingfisher (*Alcedo atthis*), while Peregrines (*Falco peregrinus*), frequently caught in the old days and described as 'just as numerous', have not followed duck into the pipes when the decoyman was present (Mackworth Praed 1946).

Between 1934 and 1940, 7,246 ducks were ringed (Table 2). The main species caught, as in the past, were Mallard and Teal while the number of Wigeon had seriously declined. Gilbert (1937) reported an increase in the number of Pintail and Shoveler and a decline in Pochard. He observed that these were always late in arriving at the lake, always in broad daylight and never captured even if they entered the pipe, as they dived back to surface past the Decoyman. The Second World War played havoc, ringing ceased in 1940 and did not resume until 1945, as it did with the reporting of recoveries from overseas, so that Table 3 includes very few records after 1940. Though why the report of a Pintail ringed on 15th February 1939 and recovered in Latvia, presumably shot, on 12th June 1941 did not reach Orielton until 1955 (Spencer 1957) remains a mystery.

A 12 minute film of the decoy made by Gilbert between 8th and 10th January 1938 has been

deposited in the National Library of Wales, this author having retained a copy. The first part is mostly general views of the decoy lake revealing the large numbers of waterfowl gathered there. The second shows Greenslade, the decoy man, with his dog in action, also a brief view of Gilbert, in short a priceless record. Some catching of ducks continued until 1941, part of the catch being sold for food to defray expenses, work finally ceasing in the autumn of 1942 when Greenslade had a serious accident while attempting to stop a runaway horse and cart.

Gilbert and Mackworth Praed had rings specific to Orielton produced, the address on these reading 'Inform Orielton Decoy, Pembroke, Britain'. Just one example is known, this now deposited with the Orielton Decoy papers in the Pembrokeshire Archives. It was used on a female Teal ringed on 8th December 1957 and shot near Wexford on 7th January 1961.The last duck to be ringed using Orielton rings was a female Teal ringed on 17th December 1958 and re-caught alive and well at the decoy on 16th January 1960.

A new beginning

On 17th July 1945, Gilbert brought Miss Barclay-Smith, Secretary of the International Committee for Bird Preservation (ICBP), to view what was required to make the decoy fully operational. She subsequently reported (Barclay-Smith 1945) that the four decoy pipes had been in a magnificent condition until a freak snowstorm on 27th January 1945 broke them all down, such was the weight of snow. Although the decoy was not shot over during the war, and having ascertained that the ducks were frequently disturbed by 'soldiers and their lady friends', she quickly persuaded the military then based at Orielton to place the decoy out of bounds 'to all ranks for all purposes.'

Grants were obtained from the Pilgrim Trust, the Royal Society and the RSPB, while a public appeal was launched under the heading 'Can the Ringing of Duck at Orielton Continue?' A fine photographic feature published in The Times on 24th February 1947 brought the work of the decoy to a nationwide audience. This was followed by two News Bulletins, 1948 and 1949, edited by C. T. Dalgety, expedition ornithologist on five Arctic expeditions 1927-1934 and closely involved with the foundation of the Wildfowl Trust (now the Wildfowl and Wetlands Trust) at Slimbridge in 1946, provide a rich additional source of information relating to the prompt re-establishment of the Decoy, in which he played a notable part, despite the damage and dilapidation to it during the wartime years.

The indomitable Greenslade, now recovered from his injuries, was again the decoyman, his pay at 70 shillings (£3.50) a week was the lowest agricultural wage, his thigh boots cost £4 8s 4d, Barclay-Smith providing 14 clothing coupons for these, while duck and dog food cost £15. Greenslade brought with him decoy dog Fan, described as 'very old --- her progenitors are believed to have been corgi and pekingese and she has charm for ducks though not as much as when she was young and sprightly. The apprentice dog, obtained as a pup, grew too large and was too unruly and had to be got rid of.'

A female Teal ringed on 23rd February 1947 was shot on 20th October the same year at Fordingbridge, Hampshire, by Colonel Mackworth Praed, while both he and Gilbert had previously been in shooting parties when Orielton ringed ducks had been taken. A drake Teal ringed on 7th January 1947 was caught and released at Borough Fen Decoy, Northamptonshire, on 20th March 1952, and subsequently shot in Denmark on 26th August 1958. The 5,000th duck ringed by Stanley Greenslade was a Tufted Duck (*Aythya fuligula*) caught on the Lily Pond below Orielton House on 26th January 1955, recovered at the Decoy on 19th January 1958 it was subsequently shot on 1st October 1961 at Lake Babite, Latvia. A Teal caught on 5th January 1956 had been ringed at Leiden,

Holland; the number of Teal from decoys in Holland being recovered in Great Britain was very large indeed. On 25th February 1958 Major-General C B Wainwright, that gentle soldier-ornithologist (Mathews 1969), caught and released a female Teal at Abberton Reservoir, Essex, ringed at Orielton on 2nd October the previous year.

Fund raising included a scheme by the Wildfowl Inquiry Committee where one could adopt a duck for 5/-, or pro rata up to five ducks for £1. Subscribers were provided with full information about their duck and, for two years, information about the decoy and recoveries, hopefully including their own duck. Despite such efforts, the cost of running the decoy was becoming prohibitive, while at the same time the number of ducks using the decoy, and so the number caught and recovered, was declining (Table 4).

In April 1950, in response to a request from the Wildfowl Inquiry Committee, the West Wales Field Society (now the Wildlife Trust of South and West Wales) took over management of the decoy. Ted Elsdon (1950) provides a very full account of the situation, highlighting the disturbance by agricultural activities close to the lake as a reason for the decline in the numbers of duck. Only two pipes were now in use, one having been practically rebuilt in 1949, while the cage traps were in poor condition. Elsdon's 'one ambition being to put Orielton back on the map as a ringing station, a place where the ducks feel comfortable and at home.' Sadly this was not to be the case, as he died of heart failure while ringing ducks at Orielton on 17th December 1950, aged just forty-nine (Allen 1951, ICBP 1951).

The shortage of funds meant that Greenslade was no longer employed, though he remained as a key volunteer, visiting the traps each night to bait them after his normal work, Lockley (1951) reiterating what was required:

> *As to the future success of the Decoy, this depends on two things: the goodwill and the agricultural operations of the owner of West Orielton Farm, so as to secure absolute quiet from August until March, which is the pre-requisite for the successful working of a decoy; and sufficient funds to employ a full-time decoy-man and pay for the expenses of feed, rings and running repairs – in short a sum of about £500 per annum. It is hoped that both these points can be met at least sufficiently to enable us to carry on this ancient decoy where, sixty years ago, 1,974 ducks were taken in a season, the highest total since the Decoy Books were first kept in 1877. Contributions of money are therefore urgently needed.*

Lockley himself purchased Orielton House and farm in 1954, though this did not include the decoy and surrounding land. Despite high hopes and considerable endeavour, the number of ducks visiting the lake was decreasing, and so was the number caught and ringed. On several occasions both Teal and Wigeon, having been caught, had their wings clipped before release on the Lily Pond in front of Orielton House, their role being as decoys to the Pond where a cage trap was situated.

In 1960, when ringing ceased, barely 200 were present on the Decoy Lake at peak counts and just 70 were caught, this author ringing one of the last Teal to be caught, or so he had thought. More recently it has come to light that Peter Stuttard, having graduated in 1965, joined the staff at Orielton Field Centre and on finding the duck traps still in good order caught and ringed 3 Wigeon, 59 Teal and 9 Mallard between January 1966 and February 1968. In addition he bred 78 Mallard at Angle and Pembroke Dock which were released at Orielton between June and December 1967 (Stuttard pers comm.).

The decline in duck and Coots at Orielton is the result of disturbance, changes in the chemistry of

Figure 4. Orielton Decoy, looking north, 2008 (David Saunders).

the lake brought about by intensification of agriculture and the change from permanent pastures on nearby farmland, all combining to reduce the food available upon which the ducks depended (Stott and Mitchell 1991). Although this was written nearly thirty years ago there has been no improvement since in the numbers of waterfowl at Orielton, indeed the decline has continued so that now the sighting of a pair of Mallard is something to be remarked upon. The open water is serene and empty, while not without some effort traces of the site of the decoy pipes can still be found, the work of the pioneers and those who followed now largely forgotten.

Acknowledgments

I owe a considerable debt to R. M. Lockley, both for first introducing my wife and me to Orielton and the Decoy and for much else across nearly forty years, to the late Humphrey Mackworth Praed for papers, reports and the priceless film about the Decoy, to Alison Harding, Natural History Museum at Tring, who tracked down Christopher Dalgety, to Annie Haycock for wildfowl counts, to Dr Eileen Rees and Maurice Durham of the Wildfowl and Wetlands Trust for an essential reference and archive material, to Brian Southern for his excellent map and to Peter Stuttard, the last person to ring ducks at Orielton. Thanks to Sophie Wilcox, Alexander and Sherardian Librarian, Oxford, for drawing my attention to the complete ducks for eating Decoy Books, to Ian Woodward of the British Trust for Ornithology for providing Orielton Duck Decoy Ringing Schedules, to the staff at Pembrokeshire Archives for their welcome assistance and to Rod Cooper and Edward Harris of the Gower Society who guided me to the correct location of the duck decoy on the Gower Peninsula. Finally thanks are due to Bob Haycock and Graham Rees, both with a wealth of experience of birds and bird watching in Pembrokeshire, for commenting on my text.

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Note: We have not been able to trace the present owners of the copyright on the photographs in Fig. 1 and Fig. 3. We apologise if anyone's rights have been infringed.

Hen Harriers (*Circus cyaneus*) in Wales in 2016

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Crynodeb

Gwnaed arolwg o boblogaeth y Bod Tinwen yng Nghymru yn 2016, fel rhan o'r pumed arolwg llawn o'r DU ac Ynys Manaw ers 1988/89. Bwriad yr arolwg oedd darganfod maint y boblogaeth, ei dosbarthiad a'i llwyddiant nythu, a chymharu'r canlyniadau â'r arolygon blaenorol. Y nod oedd cael amcangyfrif newydd o faint y boblogaeth, nodi unrhyw dueddiadau a darparu data ar gyfer dadansoddiad pellach o achosion newidiadau. Yng Nghymru, archwiliwyd pob un o'r sgwariau 10 cilomedr yn yr ardal nythu gan aelodau grwpiau astudio adar rheibus, dau weithiwr maes a gyflogid gan yr RSPB, a staff a gwirfoddolwyr RSPB, Cyfoeth Naturiol Cymru a chyrff cadwraeth eraill. Yn 2016, amcangyfrifwyd fod 575 pâr yn dal tiriogaeth (cyfwng hyder 95% 477–694) yn y DU ac Ynys Manaw, gostyngiad heb fod yn arwyddocaol o 13% ers 2010. Roedd 35 pâr yn dal tiriogaeth yng Nghymru, gostyngiad o 39% ers 2010.

Summary

The Hen Harrier population in Wales was surveyed in 2016, as part of the fifth full survey of the UK and Isle of Man since 1988/89. The survey aimed to investigate population size, distribution and breeding success and to compare results with the previous surveys. The aims of the survey were to provide updated estimates of population size, identify trends, and provide data for further analyses of drivers of change. In Wales, comprehensive coverage of all of the 10km squares in the defined breeding range was carried out by raptor study group members, two fieldworkers employed by RSPB, and staff and volunteers from RSPB, Natural Resources Wales and other conservation organisations. In 2016, there were an estimated 575 territorial pairs (95% confidence limits 477–694) in the UK and Isle of Man, a non-significant decline of 13% since 2010. Wales held 35 territorial pairs in 2016, a decline of 39% since 2010.

Introduction

In the UK, Hen Harriers typically breed in heather and grass moorland and young conifer forests, from sea level up to an altitude of 700m. Before the 1830s, Hen Harriers bred in parts of south and north Wales, but by the middle of the 19th century breeding was only occasional in Wales (Holloway 1996). Hen Harriers have been slowly recovering in both numbers and range since they recolonised Wales in the late 1950s (Lovegrove et al. 1994). From the late 1970s, range and numbers remained fairly stable until the early 1990s (Lovegrove *et al.* 1994).

Hen Harriers and other raptors have been protected by law since 1954, but have since been subject to illegal killing of adults and destruction of nests and nest contents in the UK, particularly on moorland managed for driven Red Grouse (*Lagopus lagopus scotica*) shooting, which is otherwise suitable habitat for breeding and foraging Hen Harriers, thus limiting their abundance and distribution (e.g. Etheridge et al. 1997, Thirgood and Redpath 2008, Thompson et al. 2016, Murgatroyd *et al*. 2019). The numbers and distribution of breeding Hen Harriers in the UK have also

been shown to be influenced by loss and degradation of upland habitats, changes in forestry habitats, changes in prey availability and abundance, climate change, effects of upland wind farms and predation (Amar *et al*. 2008, Haworth and Fielding 2009, Ludwig *et al*. 2017, McMillan 2014, Pearce-Higgins *et al*. 2009, Whitfield *et al*. 2008).

Although the Hen Harrier is widespread across Europe, populations have been declining over the past 20 years and the species is considered Near-threatened in the European Red List of Birds (BirdLife International 2015). The species is on the Red list of Birds of Conservation Concern in the UK, due to the historical decline (Eaton *et al*. 2015) and is listed on Annex 1 of the EU Birds Directive (2009/147/EC), with two Special Protection Areas (SPAs), Berwyn and Migneint-Arenig-Dduallt, designated for breeding Hen Harriers in Wales (Stroud *et al*. 2016).

Here, we report the findings of the fifth full survey of Hen Harriers in Wales, conducted in 2016. The aims of the survey were to provide updated estimates of population size, identify trends since the last survey, and provide data for further analyses of drivers of change in breeding Hen Harrier populations.

Survey methods

The survey methods followed the standard methods from previous national surveys (Wotton *et al*. 2018). Surveys were carried out in suitable weather conditions from the beginning of April to the end of July. A minimum of two visits were made to each 10km square. If breeding was not confirmed during the two visits, a third visit was recommended between late June and the end of July. All potentially suitable breeding habitat within each 10km square was surveyed. Surveys were conducted through a combination of searches and scanning suitable habitat from appropriate vantage points. Where Hen Harriers were observed, information was collected on the location: six-figure grid reference; the number and sex of birds; the behaviour of the bird(s); the dominant habitat within 100 m of each sighting; and any evidence of nesting. On subsequent visits, all suitable habitat was searched again and attempts were made to confirm breeding at all locations where birds were recorded on the previous visit.

Hen Harrier records were classified into proven, probable or possible breeding categories according to the criteria followed for the previous national surveys. As with previous surveys, three population estimates were calculated: the number of proven breeding territories only, the number of territorial pairs (proven and probable breeding territories), and the number of territorial pairs plus records of possible breeding (i.e. apparently single birds). Possible records were included in a separate estimate as it is considered that most of these were unlikely to be breeding or territorial birds. It is known that a proportion of the population of most raptor species do not attempt to breed each year due to a number of factors including lack of prey or suitable nest sites (Newton 1979). For Wales, the population figures were simply the sum of the counts made in the census squares, as the potential for any territories being missed was very low given the comprehensive coverage.

For each Hen Harrier observation of territorial pairs and single birds, the dominant habitat within a 100m radius of the sighting was recorded by the fieldworker and assigned to the following land management classes: heather moor (heather-dominated moorland showing no visible form of intensive management for Red Grouse shooting); grouse moor (heather-dominated moorland managed using rotational strip burning for Red Grouse shooting); grass moor (grass-dominated moorland, including bog with low heather cover); young forest (pre-canopy closure, including native woodland regeneration); mature conifer plantation (post-canopy closure); scrub/brash. Land management class details were recorded for all Hen Harrier records in Wales in 2016. Analysis of

land management class data used all records of territorial pairs plus possible records to allow comparability with the previous full surveys.

An assessment was made of numbers of territorial pairs in 2016, and change since 2010, within the SPAs that are designated for breeding Hen Harriers. This information is important for the UK statutory agencies reporting on the condition of these SPAs to the EU (JNCC 2003).

Results summary

In Wales, two of the 51 census squares were not surveyed, although it was considered that these squares no longer held suitable breeding habitat. There was increased coverage in Wales in 2016 compared to 2010, with 49 10km squares covered in 2016 compared to 36 in 2010 (Fig. 1).

2010 2016

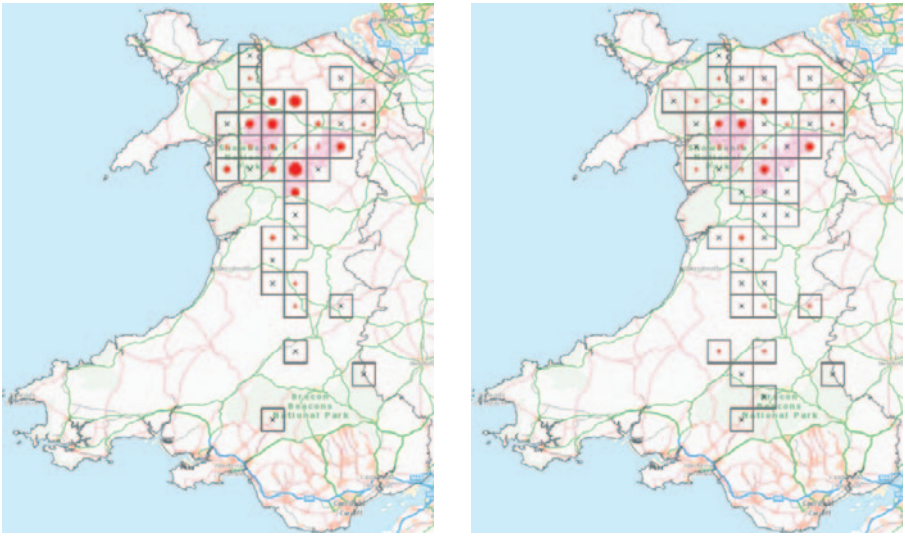


Figure 1. Survey coverage in Wales in 2010 and 2016, with black crosses in 10km-squares signifying zero counts and graduated red circles showing the number of territorial pairs (scale 1-8). The two SPAs designated for breeding Hen Harriers in Wales, Berwyn and Migneint-Arenig-Dduallt, are highlighted in pink.

The population in Wales decreased by 39% between 2010 and 2016, from 57 to 35 territorial pairs, after increases from 1998 to 2004 and 2004 to 2010 (Figure 2). Of the 51 squares surveyed in 2016, 35 were also surveyed in 2010, showing a decline of 44% within these squares between the two surveys (Fig. 1). Figure 3 highlights the main decline between 2010 and 2016 being from the core range in North Wales. In Wales, there was a sharp decline in numbers on heather moor, from 92% of the total in 2010 to 70% in 2016, with numbers increasing on grass moor (8% to 20%).

The two SPAs designated for breeding Hen Harriers in Wales were fully surveyed in 2016, with ten territorial pairs recorded in each SPA (57% of the Wales total). This compares to 13 and 16 territorial pairs respectively in 2010 (51% of the 2010 Welsh total). In the UK and Isle of Man, the number of territorial pairs was estimated at 575 (95% Confidence Limits, 478–695), a non-significant 13%

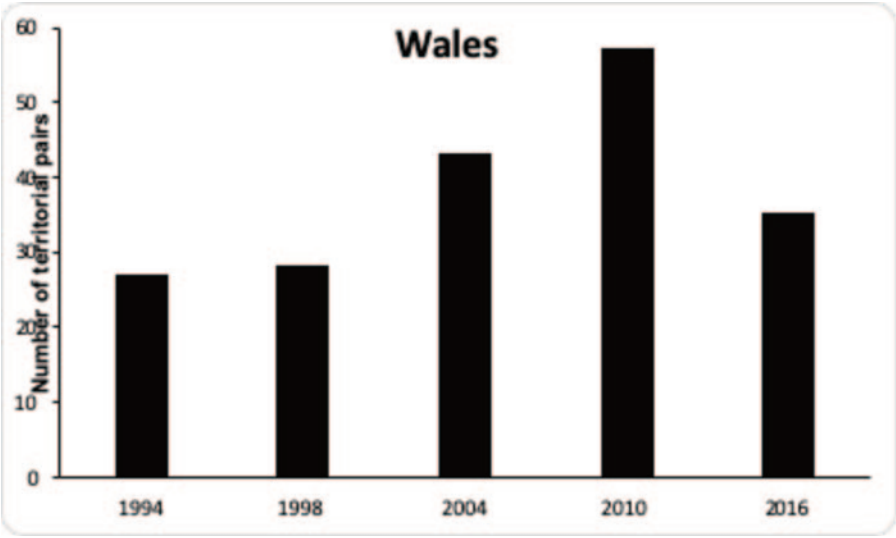


Figure 2. The trend in the number of territorial pairs of Hen Harriers in Wales between 1994 and 2016.

decline since 2010 (Wotton *et al*. 2018).

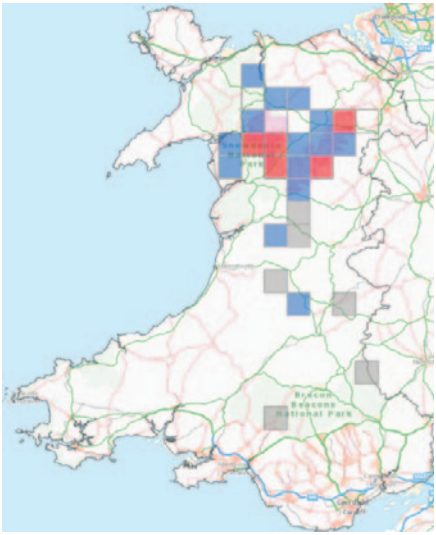
Discussion

The results of the 2016 Hen Harrier survey show a marked decline in the number of Hen Harrier territorial pairs in Wales since 2010 (Fig. 2). This decline follows a steady increase since the first survey in Wales in 1994 (Fig. 2), and the population is now closer to the 28 territorial pairs recorded in 1998 (Sim *et al*. 2001).

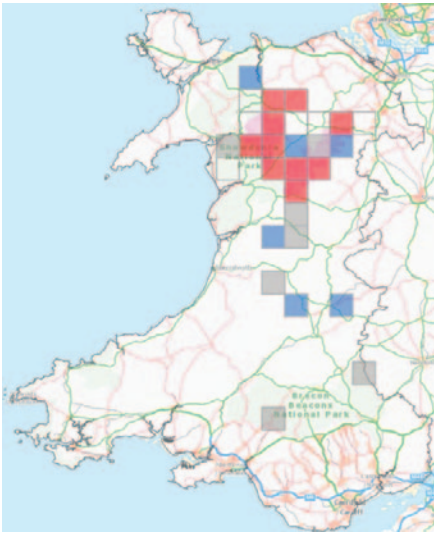
The changes to the Welsh Hen Harrier population are likely to be the result of a combination of factors, with successive seasons of poor weather potentially impacting on the numbers of territorial/breeding pairs recorded. Over recent years, poor productivity has probably been due to a combination of poor spring weather, lack of prey availability and changes in management around some regularly-used sites (possibly linked to a lack of prey). Though the direct causes of this drop in numbers are not fully understood, Hen Harriers face a variety of threats and the results of the survey are a trigger to look at this more thoroughly.

The sharp decline in Wales since 2010 follows substantial increases since 1998, when 28 territorial pairs were recorded (Sim *et al*. 2001). The increase in numbers in Wales up to the 2010 survey was attributed to improved breeding productivity due to a combination of warmer weather during the nesting period and reduced human interference (Whitfield *et al*. 2008). Recent springs in North Wales, up to and including 2016, have featured colder spells than the previous 20 years (Met Office 2017), which may have impacted upon the population. During this period, poor productivity may have been due to a combination of poor spring weather, lack of prey availability and changes in upland management, including grazing regimes and drainage. The 2016 survey did show that Hen Harriers have continued to maintain their distribution in Wales, though the majority of the population is still centred on the two SPAs for which the species is a qualifying feature.

2004 to 2010



2004 to 2016



2010 to 2016

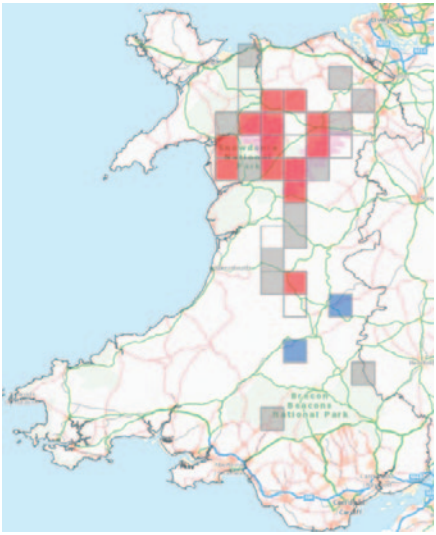


Figure 3. Changes in 10km square occupancy in Wales between the 2004, 2010 and 2016 national surveys, shown as: red = decline; blue = increase; clear = no change; grey = no change, zero counts.

Reports from 2017 and 2018, however, suggest that numbers in core monitored areas were at similar levels before 2016. Annual monitoring in the Berwyn SPA suggests that the population in Wales may be more stable than the national survey results suggest (Keith Offord pers. comm.)

It has been estimated that there is suitable habitat in the UK to sustain a Hen Harrier population of 2,514-2,653 pairs in the absence of illegal persecution (Fielding *et al*. 2011), including 246-260 in Wales, although it should be noted that this report is based on national survey data before 2010 and covers potentially suitable upland habitat only.

Acknowledgements

The survey would not have been possible without the dedication of survey volunteers, the members of the raptor and upland bird study groups in Wales and staff from RSPB and Natural Resources Wales. Additional thanks go to Stephen Bladwell, Becky Clews-Roberts, Mick Green, Keith Offord and Dave Rees. The survey was funded by SNH, RSPB, NRW, NIEA and the Isle of Man Department of Environment, Food and Agriculture. The survey was also organised as part of the RSPB LIFE+ Hen Harrier project.

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A female Hen Harrier drops a prey item for three newly fledged juveniles to catch (Gareth Jones).

Population trends of Merlin (*Falco columbarius*) in the Cambrian Mountains

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Crynodeb

Gwnaed arolwg o fryniau canolbarth Cymru, yn cynnwys SddGA Pumlumon ac AGA Elenydd – Mallaen am y Cudyll Bach yng ngwanwyn 2018. Mae'r papur yma'n rhoi manylion a chanlyniadau'r arolwg. Defnyddiwyd dulliau arolwg safonol, gydag ymweliadau pan oedd y tywydd yn weddol. Cafwyd hyd i bum pâr yn nythu a dau geiliog unig. Roedd pob pâr heblaw un mewn planhigfeydd coedwigaeth yn agos iawn i rostir glaswelltog. Dengys y canlyniadau ostyngiad difrifol ym mhoblogaeth y Cudyll Bach, a thrafodir rhesymau posibl am hyn.

Summary

The mid- Wales hills of the Cambrian Mountains, comprising Pumlumon SSSI and Elenydd – Mallaen SPA were surveyed for Merlins in Spring 2018. This paper gives the details and results of that survey. Standard survey methods were followed, with visits being made in reasonable weather conditions. Five breeding pairs were located along with two lone males. All but one pair were found in forestry plantations immediately adjacent to grass moorland. The results indicated a serious decline in the Merlin population and potential reasons are discussed.

Introduction

Following a probable increase and a stable population in the 1990s (Rebecca and Bainbridge 1998) concern has been expressed over potentially serious declines of breeding Merlins in Wales and they are now are Red listed (Bladwell *et al*. 2018.) Despite being a feature of the Elenydd - Mallaen SPA, the last comprehensive survey for this species on the site was in 2003. Pumlumon has been monitored by local birdwatchers with varying effort over the years. Therefore, to address concerns of declines, a large area of Mid-Wales was surveyed for Merlins in Spring 2018. The survey was intended to provide an updated population estimate for monitoring of Merlins within the area. This paper gives the details and results of that survey.

Methods and area

The survey covered the whole of the Elenydd - Mallaen SPA and the area covered by the Pumlumon SSSI and immediate surroundings. This covers most of the Cambrian Mountains from Mynydd Mallaen in the south to Glaslyn in the north. Survey methods were based on those detailed by Gilbert *et al*. (1998) who recommended at least four visits during the months April to July. Due to resource constraints, sites where proof of breeding was found were not generally re-visited and no effort was made to find actual nests or record nest outcomes.

Information on previously known sites was available from a previous survey of the Elenydd - Mallaen SPA in 2003 (Green 2003) along with previous knowledge of the Pumlumon area and the SPA from

the survey team. All previously known sites and areas of known likely habitat were targeted for visits. It was considered that the survey team had more than sufficient expertise to judge the likelihood of an area for Merlin.

During visits to all areas all observations of Merlin were recorded, along with other signs such as pluckings and pellets. If signs of Merlin were found, the site was watched from a vantage point to confirm breeding. Confirmation of breeding was taken as nest found, food pass, alarming adults or flying young. Presence of signs, such as fresh pluckings or pellets, where no birds were seen was recorded as an 'actively occupied site' – birds present but breeding attempt not confirmed. This category will cover pairs that failed early and where the nest was not found. Gilbert *et al*. consider that this category indicates a breeding pair.

Areas considered suitable habitat but where no signs of birds were found on the initial visits were visited during May and June and watched from vantage points to be sure no birds were present. Areas where signs had been found but no birds seen in May or June were re-visited if time allowed. Once breeding had been confirmed as definite or likely no further visits were made. Details of habitat around the occupied sites were also recorded.

Results

Elenydd - Mallaen SPA
Three pairs were found, along with a juvenile male present in the south of the area early in the survey. All three pairs were heard calling and there was extensive evidence of pluckings. All three nests were in conifers adjacent to *Molinia* moorland.

Pumlumon area
Two pairs were found, both with evidence of calling birds, and one site with pluckings. One site was in a conifer plantation adjacent to *Molinia / Nardus* moorland. The second was in *Calluna* on a steep north-facing slope. In addition, at two former sites male Merlins were seen but with no signs of nesting.

Population trends

The population estimate from this study shows a steep decline since the last comprehensive survey. Green (2003) found 11 pairs within the SPA. This compared well with the only previous comprehensive study of the area which produced an estimate of 10-20 pairs for the larger area of the Cambrian Mountains ESA (Parr 1991), carried out over 3 years (1986-89). The ESA area included the moors around Pumlumon which previously held 4-5 pairs.

Previous surveys in the 1980s and the 1990s showed that, following apparent decline, the population of Merlin in the UK was stable or increasing (Rebecca and Bainbridge 1998; Balmer *et al*. 2013). The last national survey (Ewing *et al.* 2011) was in 2008. This concluded that the UK population appeared stable (although with a not statistically significant decline of 13% since 1993-94), with an estimated population for Wales of 94 pairs. It was, however, noted that "the population estimate for Wales may have been biased upwards by low coverage in the south of the country", and that "marked declines were noted in several regional Merlin populations" and also that "repeated counts from areas with good coverage, however, confirm large declines in several upland regions of England, Wales and northeast Scotland".

Ewing *et al*. also suggest that possible reasons for decline include prey availability and loss of nesting

habitat from, for example, maturing of conifer plantations. The surveyors in this survey noted that there appeared to be very low numbers of Meadow Pipits (*Anthus pratensis*) and Skylark (*Alauda arvensis*) compared with previous experience. This may be due to the very cold early spring followed by drought, and this is reinforced by the fact that at least two Merlin territories that were unoccupied in this study have been found to be occupied in early 2019. However, this cannot account for the larger declines in Merlin and more likely reflects the overall decline in many upland species (e.g. Crump and Green 2012). In addition, as most pairs found were nesting in conifer plantations around the site boundaries, the management of these plantations has implications for future populations. Merlins tend to nest near the edge of plantations. In previous surveys forest edges were walked for evidence of Merlin pluckings etc. Recent felling programmes have meant that parts of the forest edge around the sites have now retreated some distance, and the felled tree stumps provide so many possible plucking posts that it is impossible to practically locate pairs by this method. Location of nests on the new forest 'edge', well within the plantation boundaries, will require many hours of speculative watching in all forest areas – such time was not always available in the current survey, although it only affects a few areas at present. As the felling and replanting programme continues this will have implications for future surveys.

In 2003 the population of Merlin in the Elenydd - Mallaen SPA represented just under 1% of the UK population, based on the 1998 population estimate of 1,300 pairs. The current total of 3 pairs, compared with the most recent population estimate of 1,162 pairs means that it now represents only c. 0.26% of the UK population. As the Merlin is a feature of the SPA designation this means that the site can no longer be recognised as in favourable condition.

Conclusion

The serious decline of Merlin in the Cambrian Mountains seems to reflect long term declines in many upland species and is a cause for serious concern for the future of Wales' uplands.

Acknowledgments

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The status of the Dotterel (*Charadrius morinellus*) in Wales

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Crynodeb

Mae'r papur yma'n adolygu statws Hutan y Mynydd yng Nghymru, fel aderyn sy'n nythu ac fel ymwelydd ar adegau mudo. Daw'r unig gofnodion pendant o nythu o'r Carneddau yn Sir Gaernarfon yn y cyfnod rhwng 1967 a chanol y 1970au. Casglwyd cofnodion o adar yn mudo trwy Gymru rhwng 1990 a 2017, cyfanswm o 431 cofnod o 1,594 o adar unigol. Cofnodwyd adar ym mhob un o is-siroedd Cymru yn y cyfnod yma, gyda'r nifer mwyaf yn Sir Gaernarfon a Sir Gaerfyrddin, oedd rhyngddynt yn gyfrifol am dros hanner y cofnodion yng Nghymru a bron ddau draean o'r cyfanswm o adar unigol. Daeth y mwyafrif o'r cofnodion hyn o ychydig o safleoedd traddodiadol. Cofnodwyd 67.8% o'r cyfanswm o unigolion yng Nghymru yn yr ucheldir yn ystod y gwanwyn. Dengys cymhariaeth fesul degawd nad yw'r nifer o gofnodion o'r ucheldir yn y gwanwyn wedi newid yn sylweddol, ond fod y nifer o adar unigol a gofnodwyd ar gyfartaledd wedi lleihau ers y 1990au.

Summary

This paper reviews the status of the Dotterel in Wales, both as a breeding bird and as a passage migrant. Records of confirmed breeding in Wales are restricted to the Carneddau in Caernarfonshire in the period between 1967 and the mid-1970s. Records of passage birds between 1990 and 2017 were collected, a total of 431 records, involving 1,594 individuals. Birds were recorded in all the Welsh vice-counties in this period, with the largest number of individuals in Caernarfonshire and Carmarthenshire, which between them were responsible for over half the number of records in Wales and almost two thirds of the total number of individuals. Most of these records came from a few traditional sites. 67.8% of the total number of birds recorded in Wales were at upland sites in spring. A comparison by decade shows that although the number of records from the uplands in spring has not changed greatly, the average number of birds recorded has declined since the 1990s.

Introduction

The Eurasian Dotterel breeds on the Arctic tundra of northern Europe and Siberia, and on mountains which offer similar conditions, such as the Scottish mountains, with small populations on some southern and central European mountain ranges (Hagemeijer and Blair 1997). There are a few records of breeding Dotterel in the Welsh mountains, but there is no evidence that the species has ever been a regular breeder in Wales. Dotterel mainly winter in North Africa and the Middle East eastward to Iraq, with most recoveries of British-ringed birds from Morocco (Wernham *et al*. 2002). Some of the birds passing through Wales on the way to and from their breeding grounds stop off at upland and coastal sites here for varying periods, sometimes as single birds but more often in groups, known as a “trip”.

Methods

Records of Dotterel were obtained mainly from the Welsh Bird Report, county bird reports and from the county avifaunas listed in the References, though some county recorders were consulted for further details. All records for Wales during the period from 1990 to 2017 inclusive were collected. Records which came from the same site around the same period were assessed to consider whether several records at a site were likely to refer to the same birds present on different dates or probably involved different individuals. Records thought likely to refer to the same individual birds were combined. This included records at two different sites in Pembrokeshire on 6th May 2016, where the same birds were thought to be involved. Where an individual bird was thought to have been present for several days, the first date recorded was used in the analysis of dates. In calculating the number of birds involved, the lowest number mentioned in a record was used, so for example records of 10+ birds or 10-12 birds were both treated as 10. In calculating totals for individual vice-counties, records from sites on the border between two vice-counties were allocated to the vice-county given by the observer. Some records gave the location only as a general area, e.g. Carneddau or Brecon Beacons, and these were not used in the analysis of sites.

Breeding Dotterel in Wales

Forrester *et al*. (2012) stated that in Scotland the Dotterel breeds almost entirely in the alpine zone, above the tree line, predominantly on extensive open ridges, spurs and plateaux and avoiding steep slopes. The areas preferred were those dominated by moss, particularly Woolly-hair Moss (*Racomitrium lanuginosum*) and lichen-heaths, or open Three-leaved Rush (*Juncus trifidus*) fellfield. *Racomitrium* heath is a habitat which is contracting in its distribution, especially in regions south of the Highlands (Armitage *et al*. 2005).

Though there is suitable habitat available in parts of the Welsh uplands, there were no reports indicating even possible breeding in Wales before the second half of the 20th century. O.V. Aplin (1903) reported that he had found Dotterel on Cadair Idris in Meirionnydd in early May in two successive years, 1901 and 1902. He commented:

> *The Dotterel has seldom been recorded from any part of Wales. But I think the fact of our finding some on the same mountain early in May in two successive years points to the probability that they are regular visitors to the Cambrian mountains on their passage northwards in the spring. It is, of course, just possible that the Dotterel may breed on some of the tops. The ground looks suitable.*

The high ridges of the Carneddau range in Caernarfonshire has some of the UK's most southerly examples of *Racomitrium* heath (Armitage *et al*. 2005), and it is from this range that the only confirmed records of breeding in Wales come. Barnes (1997) aptly described the history of breeding Dotterel in Caernarfonshire as "poorly documented and shrouded in secrecy", and this remains true. There was a report of a possible breeding pair in the 1950s, when a research student from Bangor University watched a possible nesting pair (Nethersole-Thompson 1973) but there was no confirmed record until R. Goodier found a nest in Snowdonia in 1967 (Ratcliffe 1990), evidently in the Carneddau. A pair probably nested in the Carneddau in 1968 and a nest with four eggs was found here in 1969 (Pritchard 2017). Nethersole-Thompson (1973) described the 1968 and 1969 records as “possibly the most exciting British dotterel news of this century”. There were further records of nesting during the early 1970s; Schofield (1975) refers to breeding pairs at three sites in the northern Carneddau. The details were kept secret and appear to have been lost. Breeding in this area had probably ceased by 1975, but a bird was seen in suitable habitat here on 18th June 1988. An adult was said to have been seen with two small chicks in the northern Carneddau about 2001, but this

could not be confirmed.

Dotterel on passage

The birds seen on passage in Wales in spring and autumn are thought to be mainly from the population breeding in Scotland. The only ringing recovery in Wales was a juvenile found predated on Foel Fras, Caernarfonshire, in September 1990 which had been ringed as a nestling in Moray, Scotland, the previous June. A colour-ringed bird observed on Pumlumon, Ceredigion, in May 1995 had been ringed as a chick in the Scottish Highlands in 1987 (Roderick and Davis 2010). Most of the birds breeding in Scotland are thought to move to their wintering grounds in a single flight. In spring, a higher proportion of birds stop off on migration, but many birds probably still reach their breeding grounds in a single flight (Whitfield *et al*. 1996).

The earliest record of a trip of Dotterel in Wales seems to be a group on Carnedd Llywelyn, Caernarfonshire, about 1820 (Price 1875). There were a few records in the late 19th century, but mostly of small numbers. These records were mainly in the north; Mathew (1894) said that the species was very rarely seen in Pembrokeshire, and Barker (1905) did not mention it in Carmarthenshire. Forrest (1907) has a record of a party of fifteen in a field near Chester, but on the Flintshire side of the border, on 8th May 1903. Records remained scanty until the second half of the 20th century, but as the number of sightings increased it became clear that most birds were found in a few traditional locations, both upland and coastal. They proved to be very regular in these areas, for example birds were recorded on spring passage on the Mynydd Du range in Carmarthenshire every year between 1987 and 2011, apart from 2001 when restrictions imposed as a result of Foot and Mouth disease made access impossible (Welsh Bird Report 2012), and birds were recorded on the Carneddau range in Caernarfonshire in all but four of the 35 years from 1985 to 2019. It should be noted that a number of observers make a point of visiting these favoured sites annually at migration times to look for Dotterel, and that birds stopping off at other sites could well be missed.

Green (1991) examined records of Dotterel in Wales between 1980 and 1989. There were 62 records of a total of 317 birds in this period, with records from every vice-county except Flintshire. 77% of these records were in the uplands, the other 23% coastal or close to the coast. Caernarfonshire had the largest share with 83 birds (26%), followed by Cardiganshire (Ceredigion) with 70 birds (22%), Anglesey with 56 (18%) and Carmarthenshire with 38 (12%). Green noted that where records prior

Vice-county	Records	% of total records	Individual birds	% of total birds
Caernarfonshire	155	36.0%	665	41.7%
Carmarthenshire	82	19.0%	348	21.8%
Pembrokeshire	42	9.7%	121	7.6%
Ceredigion	27	6.3%	116	7.3%
Breconshire	30	7.0%	106	6.7%
Anglesey	49	11.4%	97	6.1%
Meirionnydd	13	3.0%	42	2.6%
Radnorshire	10	2.3%	37	2.3%
Montgomeryshire	8	1.9%	24	1.5%
Glamorgan	10	2.3%	20	1.3%
Flintshire	2	0.5%	10	0.6%
Gwent	2	0.5%	4	0.3%
Denbighshire	1	0.2%	4	0.3%
Total	**431**		**1594**	

Table 1. Percentage of Dotterel records and total birds recorded in Wales 1990 – 2017 for each vice-county.

to 1980 were available, it was clear that observations of Dotterel in Wales had increased in the 1980s. This could not be attributed solely to an increase in the number of birds, as the number of observers actively looking for Dotterel had increased.

For the purpose of this study, records of Dotterel in Wales between 1990 and 2017 were examined. After removing records which were thought to refer to the same individual birds, there were a total of 431 records, involving 1,594 birds. Records of Dotterel came from every county, with the percentages given in Table 1.

The bulk of the passage appears to be through the western vice-counties of Wales, but mainly in the eastern part of those vice-counties. Meirionnydd has fewer records than would be expected from its location. The pattern does not differ greatly from that found by Green, though records are more concentrated in the favoured vice-counties, with Caernarfonshire and Carmarthenshire both increasing their share of the total, and now accounting for almost two thirds of the total between them.

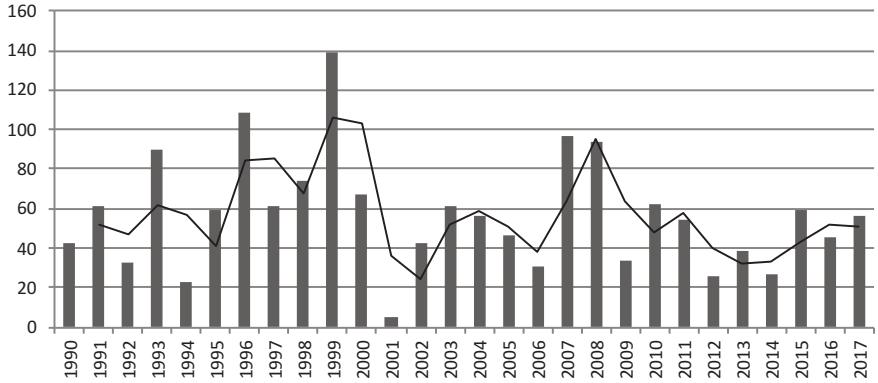

Figure 1. Estimated number of individual birds recorded in Wales 1990-2017 by year.

Passage appears to have peaked in the late 1990s, notably an estimated total of 139 birds in 1999. The very low total for 2001 was due to the access restrictions imposed as a result of the outbreak of Foot and Mouth disease, which made checking most of the main sites in spring impossible.

Of the 1,594 birds recorded, one could not be allocated with certainty to an upland or coastal site and one was a winter record. The others (1,592) were distributed as follows:

	Spring		Autumn	
	Birds	% of total	Birds	% of total
Upland	1078	67.8%	96	6.0%
Coastal	207	13.0%	211	13.2%
Total	1285	80.8%	307	19.2%

Table 2. Total number of birds recorded in spring and autumn at upland and coastal sites 1990-2017.

The highest counts recorded in the period between 1990 and 2017 were 40 between Foel Fras and Drum in the Carneddau, Caernarfonshire on 8th May 1993 and 35 on the Nantlle Ridge, Caernarfonshire, on 16th October 1999. On the coast, the highest count was 12 in Pembrokeshire

on 6th May 2016, first at Marloes Mere then presumably the same birds moving to Skomer. The highest count ever recorded in Wales was at a coastal site: up to 45 on Valley Airfield, Anglesey, from 6th to 12th May 1980. However, the average number of birds per trip is consistently higher in the uplands. A comparison by decade shows that the size of upland trips in spring, which make up the bulk of the records, has declined since the 1990s. The decade between 1990 and 1999 produced more double-figure counts of Dotterel than any similar period before or since.

Table 3. Average number of birds in a trip for upland and coastal sites in spring and autumn 1980-2017.

Period	Average no. of birds per trip			
	Spring		Autumn	
	Upland	Coastal	Upland	Coastal
1980-89 (Green 1991)	6.1		1.4	
1990-1999	6.8	2.8	4.7	1.6
2000-2009	4.8	1.9	2.2	1.4
2010-2017	3.9	3.4	2.7	1.3

The individual tops with the largest number of birds were Foel Fras in the Carneddau, Caernarfonshire (944 metres, Fig. 2) with 275 birds (17.3% of the Welsh total) and Garreg Lwyd in the Mynydd Du range, Carmarthenshire (616 metres) with 251 (15.7%), followed by Pumlumon, Ceredigion/Montgomeryshire (752 metres) with 91. Dotterel appear to have a strong preference for certain ranges; for example in Caernarfonshire the large numbers recorded from the Carneddau contrast with the very few records from the neighbouring Glyderau range, while there was not a single record from the Snowdon range in this period. This may partly be a reflection of different topography, with birds appearing to prefer tops which have an extensive summit plateau. 30.8% of all the birds recorded in Wales were in the Carneddau range, and 21.1% in the Mynydd Du range. Where further details of the habitat was available, the birds were on high windswept ridges and

Figure 2. Summit plateau of Foel Fras, Carneddau, Caernarfonshire (Rhion Pritchard).

summits with short vegetation.

Coastal records came mainly from headlands and areas of coastal heath, though there were also several records in coastal fields and at airfields. The coastal sites with most birds recorded were the Great Orme, Caernarfonshire (63) and The Range, South Stack, Anglesey (55). Of the Welsh islands, Bardsey, Skomer, Skokholm and Ramsey all recorded birds in this period.

No birds were recorded in January, February or March, with the earliest record one on Garreg Lwyd, Carmarthenshire, on 4th April 2008, which appears to be the earliest record ever for Wales. Spring passage usually peaked in early May and continued into June. One in the Trawsfynydd area,

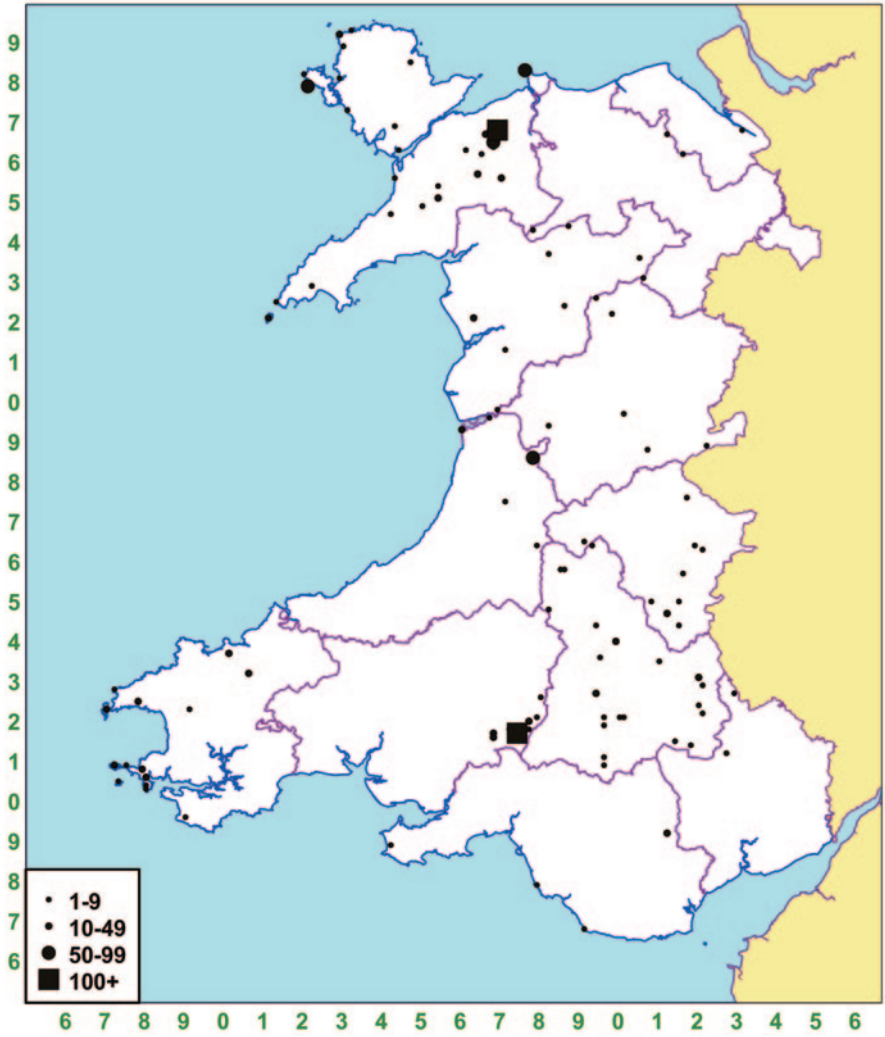

Figure 3. Map showing locations of sites and total numbers of birds where Dotterel were recorded between 1990 and 2017 in Wales.

Meirionnydd, on 24th June 2007 was considered by the observer to be possibly breeding, but the habitat in this area is not particularly suitable, and this bird is treated as being on passage. There was one July record, three birds at Ynyshir, Ceredigion, on 19th July 2003. The main passage period in autumn was more extended than in spring, from mid-August to late October. There were two November records, one at Ynyslas, Ceredigion, from 13th to 20th November 1996 and one at Pont Marquis, Malltraeth, Anglesey, on 13th November 2010. A bird at Castle Martin, Pembrokeshire, on 13th December 1998 was the first winter record for Wales, and was associating with wintering Golden Plover. Several other birds in spring and autumn were also recorded as being among a flock of Golden Plover.

There is not a great deal of evidence on how long individual birds stay at sites in Wales while on

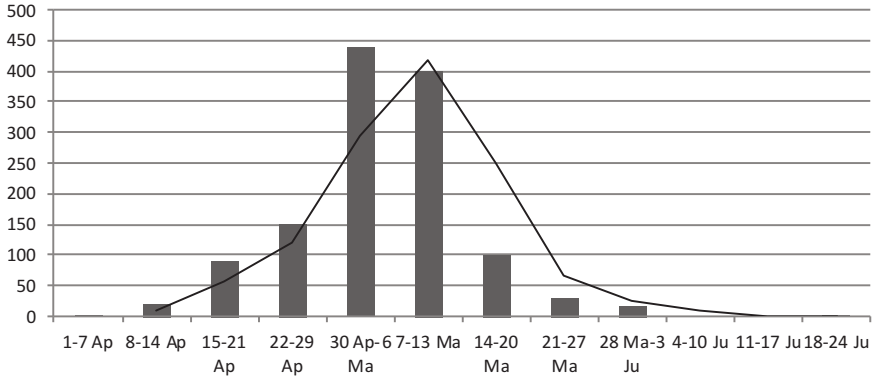

Figure 4. Number of birds recorded in spring (April - June) 1990-2017 by 7 day period. Birds staying for more than one day are recorded under the first date.

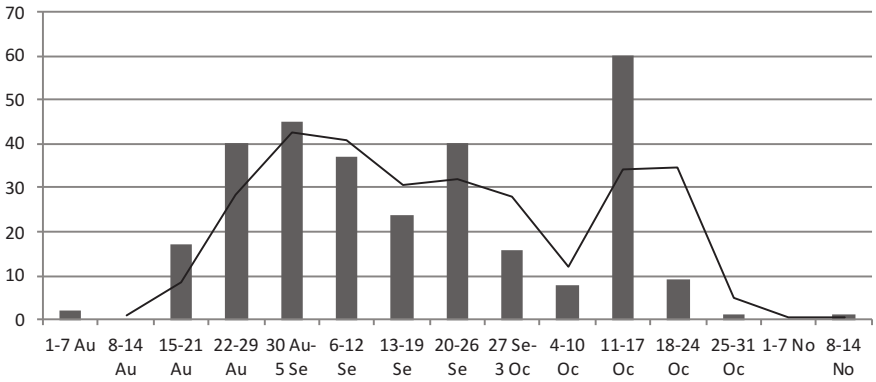

Figure 5. Number of birds recorded in autumn (August - November) 1990-2017 by 7 day period.

passage. What evidence there is comes mainly from records of single birds at well-watched coastal sites. Many appear to leave the same day or the following day, but some stay considerably longer. A juvenile at The Range, Anglesey, in October 2013 stayed from the 4th to the 17th and a moulting adult here in October 2017 stayed from 8th to 15th, while a bird at St David's Airfield in

Pembrokeshire in October 2005 stayed from 16th to 27th. Few birds appeared to stay for longer than three or four days in spring. In the uplands, visits by observers are less frequent and the number of birds involved larger, so it is seldom possible to estimate the stays of individual birds, but the fluctuation in the number of birds suggests that many pass through fairly quickly. Some records indicated the age or sex of the birds involved, but the majority did not. The records where the sex was given suggest roughly equal numbers of males and females. A number of the birds recorded in autumn were identified as juveniles, but the age of the bird is not mentioned in most records.

Future prospects in Wales

The prospects of Dotterel breeding in Wales again do not look very good. The numbers of Dotterel breeding in the UK declined by 57% between 1987 and 2011 (Hayhow *et al*. 2015). The small population breeding in northern England seems on the brink of disappearing, with none recorded in the 2011 national survey, though the 2007-11 Atlas did produce some records. Armitage *et al*. (2005) found that in parts of the Carneddau, the *Racomitrium* heath was being damaged by high grazing pressure, with sheep trampling and raised nitrogen levels causing a deterioration, though they noted that it could recover given a reduction in grazing. There has been a modest reduction in sheep numbers in the Carneddau in recent years (Pritchard 2017), but even if the habitat improves, global warming and increasing human disturbance make further breeding less likely. Numbers recorded on passage in Wales probably depend largely on the fortunes of the Scottish breeding population, and the smaller numbers recorded in recent years reflect the decline in this population. The role of the Welsh sites in providing stop-off points could be important for these birds, particularly in spring, and more research could provide further information on this. It is important that the habitat is maintained in good condition at the main sites.

Acknowledgements

Thanks are due to all the observers who submitted Dotterel records during the period 1990 to 2017, and also to County Recorders who provided data and answered queries. I am grateful to the staff at the NRW Library, Penrhosgarnedd, Bangor, for their assistance, and also Ian Spence for providing the map and Mick Green for acting as referee.

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Male Hen Harrier chasing a Honey-buzzard (Gareth Jones).

The UK Rare Breeding Birds Panel – an overview

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Crynodeb

Mae'r Panel Adar Nythu Prin, a sefydlwyd yn 1972, yn casglu a chyhoeddi cofnodion o adar nythu prin yn y DU. Cesglir y data, sy'n bwysig ar gyfer cadwraeth adar sy'n nythu, yn bennaf trwy'r rhwydwaith o gofnodwyr sirol. Yma trafodir gwaith y Panel yng Nghymru a sut y gall gwylwyr adar unigol gyfrannu ato.

Summary

The Rare Breeding Birds Panel, set up in 1972, collects and publishes records of rare breeding birds in the UK. The data, which plays a key role in the conservation of breeding birds, is mainly collected through the local county recorder network. This paper discusses the work of the Panel in relation to Wales and how individual birdwatchers can contribute.

Introduction

The Rare Breeding Birds Panel (RBBP) was established in 1972 to maintain a secure and confidential archive of all records of rare breeding birds in the UK and to produce annual reports summarising their numbers and status. These reports are published in British Birds and are available for every year since 1973. The most recent review, covering 2016 (Holling *et al*. 2018) was published in November 2018. It is typical that reports appear about two years after the breeding season to which they refer because it takes that long for data-gathering and for detailed analyses to be completed.

Why a Rare Breeding Birds Panel?

The original motivation behind the creation of the RBBP was to provide a home for records which might otherwise be lost to the ornithological record, and to this end the RBBP was created as an independent entity, totally separate from the RSPB, BTO, government conservation agencies and even the county bird recorder network. In the 1960s and 1970s especially, there was a small number of individuals who knew the whereabouts of rare breeding birds but felt unable to trust the 'authorities' and withheld records. This issue became widely acknowledged during the period of the first Atlas of Breeding Birds in Britain and Ireland (1968–1972) with some important records not being submitted to that project. Others were submitted but only with incomplete or inaccurate locational information, greatly reducing the conservation value of the data. Since the early 1970s, the independent nature of the Panel has provided a different route, capturing those more sensitive records and, through building trust with data providers, has by and large been able to secure accurate data for the ornithological record. All records have of course always been treated confidentially, but are nevertheless available for inclusion in the annual species summaries. Despite assurances, and the total absence of 'leaking' of information from the Panel, there are, sadly, a few individuals who remain tight-lipped about their findings, to the greater detriment of British ornithology. We will come back to this point later.

As the monitoring of birds in the UK has developed, the role of the Panel has expanded and the key role its data play in the conservation of breeding birds has become increasingly recognised and even more valuable. Some examples of where RBBP data have made a significant contribution in recent years include the State of the UK's Birds (e.g. Hayhow *et al*. 2017), Birds of Conservation Concern (e.g. Eaton *et al*. 2015), the wild bird indicators for the UK (e.g. DEFRA 2018) and the IUCN Red List Assessment for Great Britain (Stanbury *et al*. 2017). While the updates on populations and trends provided by the RBBP help direct species conservation policy and, critically, priorities, there are also key benefits for site conservation. The data are used to support existing and proposed new sites such as Special Protection Areas (SPAs), which are designated under European law to protect named rare and/or vulnerable species, and also for management of specific sites (e.g. internationally designated sites that are not nature reserves owned by organisations). Several national species surveys have benefited from access to RBBP data to help plan and direct effort; examples include the current Willow Tit (*Poecile montanus*) survey and the recent surveys of the Peregrine Falcon (*Falco peregrinus*).

Who is on the Panel?

The Panel consists of a small number of professional and amateur ornithologists selected for their experience and expertise; some also represent special interest areas or organisations. In recognition of the conservation value of its work, the RBBP is now funded jointly by the RSPB and the UK government via JNCC, on behalf of the country conservation agencies (NRW in Wales). BTO also makes a small annual contribution. Panel members act in an advisory role. At present, the following individuals are members of the Panel: Mark Eaton (Chairman, representing RSPB), Dawn Balmer (BTO), Helen Baker and David Stroud (both JNCC), Ian Francis (independent), Andrew King (independent) and David Norman (independent). The bulk of the work collating, analysing and reporting data, and promoting the work of the RBBP is done by the professional (part-time) secretary, who is also a member of the Panel. In the entire history of the Panel there have only been four secretaries: Tim Sharrock (1973–1983), Bob Spencer (1983–1992), Malcolm Ogilvie (1993–2006) and Mark Holling (since 2006).

What area is covered?

Geographically, the remit of the RBBP has always been the United Kingdom, thus England, Wales, Scotland and Northern Ireland, plus the UK Crown Dependency of the Isle of Man. The Channel Islands were added in 2012 so that the area covered is in line with other national reporting systems such as the BTO/JNCC/RSPB Breeding Bird Survey (BBS; e.g. Harris *et al*. 2018) and Birds of Conservation Concern (e.g. Eaton *et al*. 2015).

How are data collected?

The principal source of data is from the local recorder network. All 13 recorders in Wales submit an annual return to the RBBP secretary; the deadline for receipt of data is 30th November of the year following the breeding season being reported on. Early submission of data enables the national figures to be computed sooner, which means they are available as soon as possible for conservation. This particularly applies for the national status and trends used by the RSPB for their conservation work (e.g. in the State of the UK's Birds and species survey planning) and reviews and management of designated sites (such as the SPA network) by JNCC and the country agencies.

Typically, recorders in Wales collate the year's data for their own local bird reports during the first part of the following year, which means they have an overview of the status of rare breeding species

in their areas in advance of the November RBBP deadline. The volume of work required varies from area to area, but most vice-counties report between ten and 20 species each year (top in 2017 was Gwent with 22 species); most recording areas in Wales typically submit 20–50 records annually.

The input of county recorders to the process is essential as, uniquely, they have knowledge of sites within their areas and whether a species is likely to breed there; records received can therefore be put into perspective. The partnership between recorders and the RBBP is one of the strengths of the relationship and contributes to the high level of respect accorded to the Rare Breeding Birds Panel and its data. The Panel is extremely grateful to the help and support of all the Welsh recorders who contribute to the database on an annual basis.

Other data come from a variety of sources, including national species surveys, regular fieldwork by professional conservation staff and enthusiasts, long-term survey data including Chough (*Pyrrhocorax pyrrhocorax*) and several raptor studies in Wales, Schedule 1 submissions from licence holders, and RSPB reserves. The results of local one-off species surveys, such as that of Dartford Warblers (*Sylvia undata*) in Pembrokeshire in 2017, are also valuable.

Which species?

What is a rare breeding bird? The definition has changed over the lifetime of the Panel, beginning with the very rare (30 or fewer breeding pairs in the UK) and the rare (30–300 breeding pairs) only, then incorporating all species given special protection under Schedule 1 of the Wildlife & Countryside Act (1981). In the last ten years the definition of a rare breeding bird has been more clearly quantified, and it is now generally any species with a mean breeding population over the most recent five years for which data are available of fewer than 2,000 breeding pairs in the UK. Before a more numerous species is taken off the list, we carefully review recent records and look to see if the Breeding Bird Survey (BBS) can provide annual trends of that species. For breeding species, RBBP data complement the BBS, together providing a robust conservation tool.

Although most species on the list are on Schedule 1, this is not the most important criteria. All wild birds are of course fully protected at the nest, but because Schedule 1 has not, regrettably, been amended regularly since 1981, some of the rarest breeding species, such as Common Crane (*Grus grus*), Great White Egret (*Ardea alba*) and Icterine Warbler (*Hippolais icterina*) still do not receive special protection under the Wildlife & Countryside Act. Conversely some species that are on Schedule 1 are much more numerous as breeders, for example Barn Owl (*Tyto alba*), Kingfisher (*Alcedo atthis*) and Common Crossbill (*Loxia curvirostra*); these more numerous species are no longer on the RBBP list. The current list of species covered by the RBBP can be found on the RBBP website **www.rbbp.org.uk** There is a version of this list focussing on Welsh rare breeders at **https://birdsin.wales/wp-content/uploads/2017/01/RBBP-species-Wales-1.pdf**

It is important to remember that the criteria apply equally across the whole of the UK. While Wales has rather fewer rare breeding species than northern or eastern areas of the UK, it makes a major contribution for Chough, Hen Harrier (*Circus cyaneus*), Goshawk (*Accipiter gentilis*), Peregrine Falcon, Little Ringed Plover (*Charadrius dubius*), Willow Tit and Hawfinch (*Coccothraustes coccothraustes*).

How can you contribute?

So how does the work and objectives of the RBBP affect the everyday birdwatcher? The first thing to note is that all your bird records are important and should be submitted to the local recorder regularly so that they can feed into all systems, including local annual bird reports. WOS and local

bird clubs recommend the use of BirdTrack as a means of submitting records and more information about bird recording in Wales can be found on the WOS website at https://birdsin.wales . Every record should have an accurate location associated with it, usually a grid reference, although BirdTrack can also create GPS coordinates which can be translated into grid references. A 4-figure grid reference is good to indicate the general area a bird is present in, but a 6-figure reference is best to pinpoint a nest site.

Next, be aware of what birds are doing and any behaviour indicating breeding. This can range from singing, pairs in breeding habitat, displaying birds or nest-building to the most valuable of all - records of confirmed breeding. Breeding is deemed to be confirmed at a site if the evidence points to eggs having been laid. Suitable observations would therefore obviously be a nest with eggs or young but also recently fledged young or nidifugous young (such as ducklings) and records of adults carrying food to a nest or faecal sacs from a nest. Remember you don't need to see or search for the nest, adults only carry beakfuls of food if they are taking it to feed young birds. This is especially useful for passerines, but even raptors carrying a single prey item over a distance are likely to be heading to their nest site or fledged young. Another useful behaviour is 'distraction display', such as very agitated waders e.g. Little Ringed Plover, or wing-flapping ducks, e.g. Shoveler (*Spatula clypeata*) and Pochard (*Aythya ferina*). The local recorder can better interpret the record for county purposes as well as their RBBP submission if extra information can be provided; whatever the recording package or method used an appropriate BTO breeding code should accompany the record. Where sexes can be distinguished in the field, note the number of males and females: a record of two Pochards might be of two males, two females or one of each; if the latter we can assume a pair, one step further towards confirmed breeding and so much more valuable! All records of birds in breeding habitat, especially rare breeding birds, at the right time of year for the species are important: we don't only want confirmed breeding records, but those for lone singing males, display or a pair acting furtively can contribute so much to assess possible and/or probable breeding. Every record indicating a potential breeding pair at a site will contribute to the overall population compiled each year by the RBBP.

Some species are easier to find and record than others, but our data holdings are heavily dependent on birders finding and reporting their records. Some species are surveyed regularly by professionals; examples of these in Wales are Bittern (*Botaurus stellaris*), Osprey (*Pandion haliaetus*) and Chough. There are a number of species for which we receive limited information and for which every additional record would make a valuable contribution – for this reason we are currently unable to monitor changes in the population because of limited data received and the lack of annual data on defined survey plots. Many occur in less accessible areas, though others are more widespread but elusive. Species we would like more records of include Garganey (*Anas querquedula*), Wigeon (*Mareca penelope*), Quail (*Coturnix coturnix*), Little Egret (*Egretta garzetta*), Marsh Harrier (*Circus aeruginosus*), Short-eared (*Asio flammeus*) and Long-eared (*Asio otus*) Owls (any birds in breeding habitat from April to July), Lesser Spotted Woodpecker (*Dryobates minor*) and Dartford Warbler. Reference to the Bird Atlas (Balmer et al. 2013) will provide context of where to expect breeding birds.

Although by definition these species are rare and potentially susceptible to disturbance, most rare breeding bird monitoring can be done from a distance without the need for a licence. The welfare of the bird must always be paramount and any action which might interfere with or jeopardise any breeding attempt must in all cases be avoided. Sightings of rare breeding birds in breeding habitat should not be publicised via bird news networks or social media; it is important that more unusual records are shared in confidence with the local recorder or the RBBP secretary, but otherwise it is best to keep information out of the public domain while the birds are still (potentially) breeding.

This can apply to rare species where the only record is of a singing male, such as Melodious Warbler (*Hippolais polyglotta*) and Marsh Warbler (*Acrocephalus palustris*), where a female may be present and starting a nesting attempt unseen in the area. The RBBP secretary can advise on whether other authorities, such as RSPB, should be involved; sometimes there is a need and a benefit in publicising an event to manage birders and photographers eager to see the birds, as has happened in recent years in England with, for instance, breeding Bee-eaters (*Merops apiaster*). In some cases, information should be kept secret (other than RBBP and the recorder) for at least another season in case the pair return to the site.

Feeding back to the birding community and conservation decision making

Our annual reports give the status of all the rarer breeding birds in the UK, with total numbers of pairs by recording area and by region. These facilitate conservation decisions by organisations such as RSPB and NRW, so every record of a rare breeding bird you submit helps that important cause. Annual figures are compared to previous totals and changes in range noted. Thus, in the 2016 report, we noted significant contribution from Wales for the highest number of Goshawk territories (705 across the UK although this figure is still believed to be an underestimate owing to under recording; 146 of these were in Wales), and increases for Chough (406 UK pairs; 278 of these in Wales). Across the UK we documented record numbers of species spreading from the south: Avocet (*Recurvirostra avosetta*), Cetti's Warbler (*Cettia cetti*), Little Egret and Mediterranean Gull (*Ichthyaetus melanocephalus*), these tempered by further declines in numbers of Capercaillie (*Tetrao urogallus*), Hen Harrier and Montagu's Harrier (*Circus pygargus*).

Based on the records in our archive we can provide information to help inform other publications. We work with authors of national Atlases, scientific papers, and those compiling species reviews. Individuals are invited to use our archives to produce species reviews and anyone interested should contact the Panel Secretary.

Filling the gaps

As complete as we aim our archives to be, we are very conscious that there are gaps in some of the details and even of some specific breeding records. Colonising species, or those expanding their ranges tend to be the most fully and accurately recorded, currently for example Osprey, Avocet and Bearded Tit (*Panurus biarmicus*) in Wales, whereas there is tendency for under-reporting in the core of their ranges, respectively Scotland, the coast of south-east England and scattered reedbed colonies across the UK. This hampers our ability to maintain accurate annual numbers and to assist conservation initiatives to protect the species, for example the setting up of designated areas (e.g. Special Protection Areas) for conservation. We sometimes hear of records of very rare or unusual species nesting where we have no information e.g. Snowy Owls (*Bubo scandiacus*) on the Scottish mainland in the 1970s or 1980s. Without verified data on dates and sites, any such records will never be part of the ornithological record. We would like to invite anyone with any knowledge of such incidents to come forward so that the ornithological record can be enhanced. You can check if the record is known to the Panel by looking at the library of historical RBBP reports – all but the most recent are available for free download from the RBBP website – or within both editions of Birds in Wales published in 1994 and 2002. Please contact the Panel Secretary at secretary@rbbp.org.uk if you feel you may have some 'new' information, from anywhere in the UK. It is immensely pleasing to be able to add to our ornithological knowledge for posterity; recently breeding data of historical UK sites for Honey-buzzard (*Pernis apivorus*) and Golden Oriole (*Oriolus oriolus*) have been added to our archives thanks to the foresight of the data owners.

Further information about the Panel and its workings can be found at our website **www.rbbp.org.uk** or from the secretary: Email **secretary@rbbp.org.uk**

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The Glamorgan Bird Club Swift Project

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Crynodeb

Mae Clwb Adar Morgannwg (GBC) yn poeni am y gostyngiad cyflym yn niferoedd y Wennol Ddu (*Apus apus*) sy'n nythu yn ei ardal gofnodi. Er mwyn ceisio atal y gostyngiad yma, gwnaed cais i Gymdeithas Adarydda Cymru (CAC) yn 2016 am gymorth grant i helpu i edrych ar rai o'r pethau y credid eu bod yn effeithio ar lwyddiant nythu'r rhywogaeth eiconig yma. Profodd hyn yn sbardun i brosiect mwy wedi ei ganoli yng Nghaerdydd. Mae'n ddyddiau cynnar i'r prosiectau yma, ac maent yn debygol o gymeryd sawl blwyddyn i gael effaith.

Summary

The Glamorgan Bird Club (GBC) has become very concerned at the rapid decline in the number of Swifts (*Apus apus*) breeding in its recording area. In order to try and arrest this decline, a bid was made in 2016 to the Welsh Ornithological Society (WOS) for grant aid to help address some of the issues thought to be affecting the breeding success of this iconic species. This proved to be a springboard for a larger project based in Cardiff. These projects are in their early stages and are likely to take several years to have any effect.

Introduction

Following the fieldwork for the BTO Atlas (2007-11), it was clear that many of our formerly common species were in rapid decline. The Glamorgan Bird Club Committee met to assess the situation. After a lot of discussion, we decided that one of the species that we might be able to "help" was the Common Swift. In March 2016, we applied for and were granted a £400 Welsh Ornithological Society grant towards our Swift Recovery Project (supplemented by £200 from GBC).

We set out a plan of action to try and help this iconic species. It is thought that one of the main factors in its decline is the blocking up of roof cavities and consequently Swift nest sites during renovation work. Swifts are site faithful and will return to the same nest site, year after year. There have been cases of Swifts exhausting themselves while trying to access blocked up sites. If the current decline continues (approx. 3 – 4% p.a.) we could lose the Swift as a breeding species within the next 30 years. The following maps (see p.44) from the East Glamorgan Bird Atlas (**www.eastglamorganbirdatlas.org.uk**) illustrate the problem. Figs. 1 and 2 show the results from the last two BTO breeding surveys (1984-89 and 2007-11).

Methods

Our project was divided into three phases:

1. Awareness raising:
The initial phase of the project was mainly concerned with awareness raising. Talks and presentations were given to several wildlife groups, local biodiversity panels and the like,

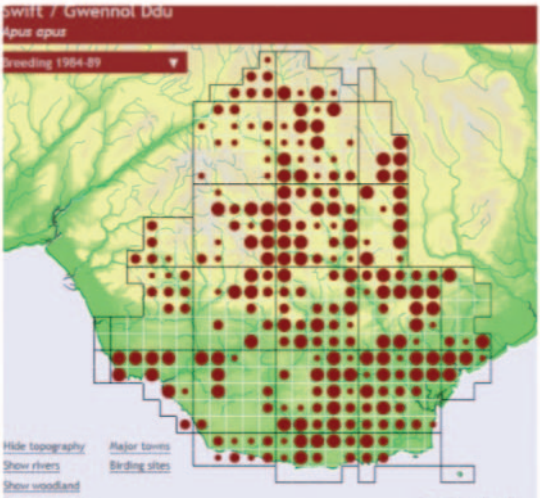

Figure 1. Swift distribution/breeding in East Glamorgan in the 1980s.

o	Present	-
•	Possible breeding	55
●	Probable breeding	78
●	Confirmed breeding	98

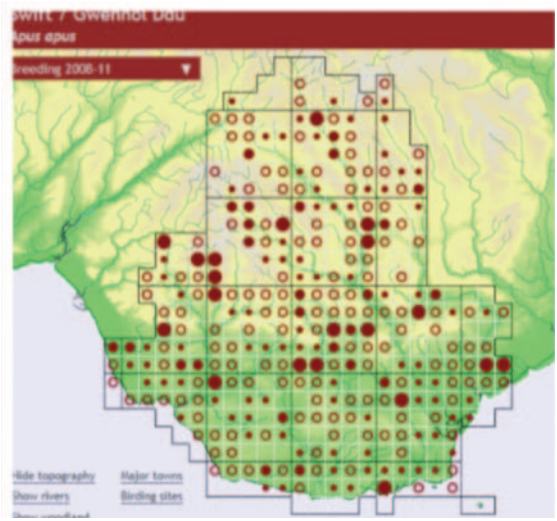

Figure 2. The results of the 2007-11 survey.

o	Present	148
•	Possible breeding	54
●	Probable breeding	21
●	Confirmed breeding	19

engendering much interest. Articles have appeared in the magazines and newsletters of the Wildlife Trust for South and West Wales, the RSPB, SEWBReC, Cardiff Naturalists and local newspapers.

A blog, glamorganswiftchampions.blogspot.co.uk was set up, giving up-to-date information on progress. Contact was also made with a national organisation, the Local Swift Network, whose on-line forum has been very informative, and three of the organising group attended a conference on Swifts in November 2016 in Bristol, where useful contacts and ideas were garnered.

The next stage of our awareness raising was to leaflet some of the streets, where Swifts were known to be present. The idea was to inform residents that Swifts were nesting in their street. Several

WHERE HAVE ALL THE SWIFTS GONE?

Figure 3. The RSPB magazine - Nature's Home **Figure 4**. An article in the Glamorgan Gem newspaper. which contained an interview about our project.

streets have been leafleted in Cardiff and Pontypridd so far. Responses have been a little disappointing but we intend to continue this aspect in future.

2. Volunteer training:
Another aspect of our scheme was to enrol a number of keen volunteers as Swift champions. Initially, fourteen champions were recruited. A map of the areas covered by these volunteers is included on our blog. A training event was held in Llantwit Major, teaching the techniques for finding Swift nest sites (which isn't easy). Nine volunteers attended and a couple of nest sites were found and added to our Swift database. (Coincidentally we saved a couple of nest sites. One of the buildings in which we found nesting Swifts was about to be re-roofed and we were able to persuade the landowner to delay this work until the end of the breeding season). Swift champions subsequently went on to undertake surveys in their local areas.

3. Nest box schemes and monitoring:
Our original aim was to erect Swift boxes in at least four locations. Our first site was in Bedwas Junior School. We were fortunate that Caerphilly Council set up the scaffolding for this project and the school purchased three RSPB nest boxes. The children built more boxes. Two of our local Swift champions held a Q & A session with the children. A book on Swifts was donated to the school library and several Swift pin badges (donated by the RSPB) were awarded to members of the school's eco-committee. Radio Wales did a feature on this project and interviewed several of the pupils.

A workshop session was held at Kenfig Reserve Centre to build a number of Swift nest boxes. These have been used in our various schemes. One of our Swift champions built more in his home workshop, from wood purchased via the grant. We quickly realised that the cost of scaffolding was going to affect the amount of work that we'd be able to undertake. It was decided to concentrate our efforts on tall buildings, especially churches. Since then we have erected boxes in St. Illtud's Church in Llantwit Major, Trinity Church in Penarth and All Saints in Barry. (Purpose built boxes in

Figure 5. All Saints, Barry.

Figure 6. The 10 box system installed in the tower.

each church, with call systems).

Each of our church schemes has a Swift volunteer monitoring the boxes. To date we haven't attracted Swifts, but we think birds have been prospecting around the Penarth site. We do not anticipate any nest box occupation for at least three years, as it will only be "new" nesters that are likely to occupy such sites and Swifts don't breed until their third or fourth year. Bridgend College, Pencoed Campus, was keen to become involved in the project, and the students have built several nest boxes, which were donated to Parc Slip Nature Reserve in Tonddu.

Some of our Swift champions have been very pro-active. One Swift champion in Penarth has arranged for the Vale of Glamorgan Council to purchase Schwegler nest boxes, some of which have been erected on council buildings in the town and he also persuaded another church in the town to erect some external boxes. He has also arranged for a school in Cardiff to erect boxes. Another Swift champion has arranged for a local Housing Association in Cardiff to include Swift bricks in their new developments and the governor of a school development in the city has been in touch, asking for advice on installing Swift bricks in the new building. A talk to the Merthyr LBAP group, led directly to the council erecting a small Swift tower in Parc Taf Bargoed, the boxes, being built by the local RNIB. Sadly this was vandalised and has had to be removed.

Further developments

The WOS grant proved to be a springboard to other developments. An exciting project has developed from the GBC/WOS project. A partnership between the Glamorgan Bird Club, the RSPB and the Cardiff Harbour Authority led to a bid to HLF for a large Swift tower on the Cardiff Bay Barrage (c. £54K). We are pleased that this was successful, and plans are in place to erect a 90 box tower on the barrage in 2019. Once erected, we shall be using the tower to further spread the message about the plight of Swifts. Jenny Rathbone AM, the species champion for Swifts, has been very supportive. Several schools have also linked in to the project. We plan to install CCTV cameras, if/when Swifts eventually use any of our boxes.

The link with the RSPB has been a real game changer. The role of Swift surveyor was advertised on their web site and attracted 50 volunteers to the role. A city-wide survey was organised in the summer of 2018 and many "new" Swift sites were discovered. We plan to continue this survey over the next two summers. Below are two maps that were produced, showing Swift nest sites and also the location of low-flying screaming parties, indicative of potential nesting nearby. These maps have

been shared with relevant authorities to try and ensure that known Swift sites have some level of protection.

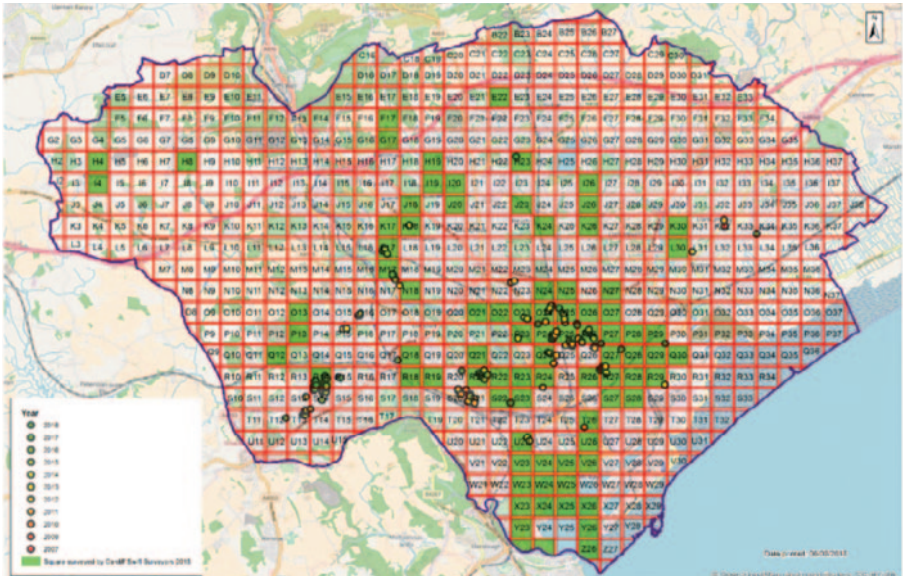

Figure 7. Results of the 2018 Cardiff Swift Nesting Survey.

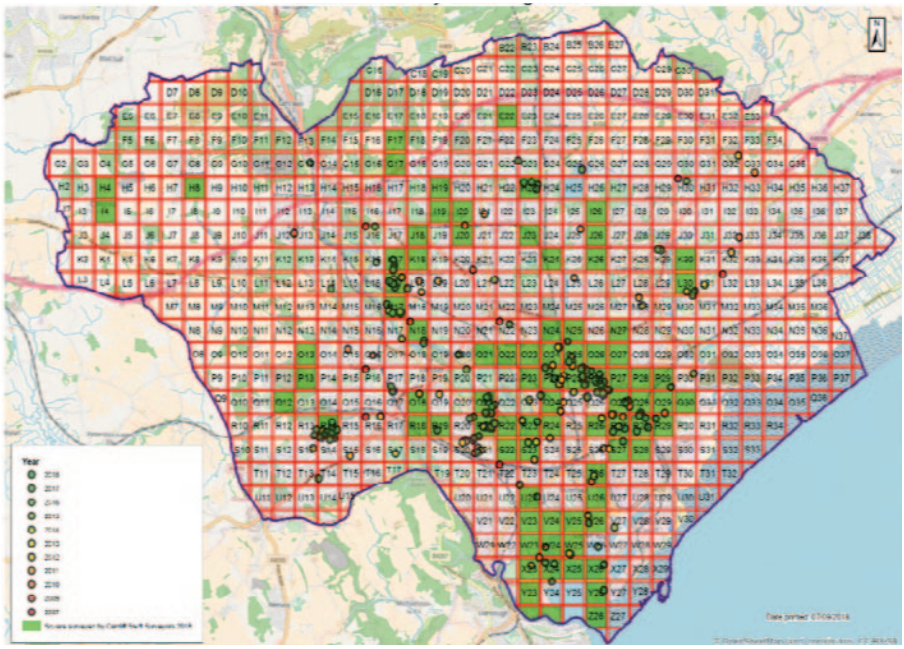

Figure 8. The location of screaming parties.

One of our Swift champions has been liaising with the Wildlife Trust of South and West Wales, advising on the siting of a Swift tower, with internal call system, powered by a solar panel, at Cadoxton Ponds, Barry. This has been placed alongside their environment/education centre and will be used in their education programme.

Figure 9. The Stoneyford tower at Cadoxton Ponds.

This project will be continuing into the future. Many thanks to the Welsh Ornithological Society for providing us with the initial grant. The project has progressed further since this paper was prepared, and the Swift tower has now been erected on the Cardiff Bay Barrage. Further details of new developments can be found on the blog at **glamorganswiftchampions.blogspot.co.uk**

A new Birds of Wales to mark the 30th anniversary of the Welsh Ornithological Society

There has only ever been one book giving a complete account of all the bird species ever recorded in Wales. This was Birds in Wales, by Roger Lovegrove, Graham Williams and Iolo Williams, published by Poyser in 1994. This volume has been of huge value for bird conservation in Wales since then, a first port of call for birdwatchers and conservationists alike. However, the information contained in it is now nearly thirty years old, and there have been great changes in the fortunes of many species since it was published. In 2002 the Welsh Ornithological Society published Birds in Wales 1992-2000 by Jon Green to update the original Birds in Wales, but the time has now come for a new book to give an up-to-date picture of the birds of Wales.

There have been very significant changes since Birds in Wales was published in 1994. The list of birds recorded in Wales is longer now, with a good number of new species recorded as vagrants. Wales has gained several new breeding species, notably Little Egret, Eider, Avocet and Dartford Warbler. Other species, such as Great White Egret, are being seen in Wales in much greater numbers than formerly and may well breed in the next few years. On the other hand, some breeding species have been lost since 1994; the Corn Bunting was already in trouble in Wales in 1994 but has now vanished as a breeder. Perhaps more significant still is that some species which appeared to be reasonably secure in 1994, such as the Curlew, are now in real trouble.

To mark WOS' 30th anniversary, work has begun on a new volume, describing the history and current status of every bird ever recorded in Wales, common and rare, with an assessment of the conservation issues facing our breeding birds. The publication of this new book will give an up-to-date picture of how well or how badly our birds are faring and will be an invaluable resource for anybody interested in birds in Wales. The book will include chapters on habitats, climate, islands and nature reserves etc. as well as individual species accounts. It will be produced and published by Liverpool University Press.

We aim to produce this publication on a financial break-even basis. The project will be run at minimal administrative costs from the Society's reserves, but in order to meet the production and publication costs of around £23,000 and ensure that the retail cost is kept to a reasonable level we are inviting businesses, organisations and individuals to sponsor each species on the current Welsh list. Details of the species sponsorship scheme are given below and in more detail at:
https://birdsin.wales/a-new-birds-of-wales/

We invite individuals, businesses and organisations to sponsor one (or more!) individual species. £200 will secure sole sponsorship of a species and the sponsor will be acknowledged alongside the relevant species account in the book. We realise that this may be more than many individuals can afford, so we will be launching a scheme of shared sponsorship (probably for £25 per person) later in the summer of 2019.

If you, or your organisation, wish to sponsor a species, please go to:
https://birdsin.wales/a-new-birds-of-wales/ for more background to the project and a sponsorship application form and then email **web@birdsin.wales** with your application. The list of species available for sponsorship will be updated on a fortnightly basis and can be accessed on the WOS website at:
https://birdsin.wales/sponsorship-spreadsheet-for-website-1/

If you would prefer to write in about sponsorship, please contact Giles Pepler, Rosedan, Coleshill Fechan, Bagillt CH6 6DH.

£12

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